

Final 2006 Service Plan:

**Bus and Rapid Transit Service
Changes &**

**Service Delivery Policy
Modifications**

June 2006



MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

Final 2006 Service Plan

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INTRODUCTION

This document contains the final service change recommendations of the 2006 service planning process. These recommendations are the result of a two-year planning and analysis effort, as well as extensive public input.

During the spring of 2005, the Service Planning Department began the formal process for development of the 2006 Service Plan by holding seven public workshops to solicit service change suggestions. The public was also given the opportunity to provide comments via email and other channels within the MBTA.

In addition to suggestions received during the public workshops, the Service Planning Department developed service change proposals based on on-going customer feedback since completion of the 2004 Service Plan and on analysis of the performance of routes against the service standards in the *Service Delivery Policy*. Service change proposals were also solicited from other departments within the MBTA, such as Bus Operations.

Service change proposals were released to the public in December 2005, in the form of the Preliminary 2006 Service Plan. Subsequently, the MBTA held a series of seven public meeting and one hearing in January and February of 2006. This public process created a forum for public comment on the proposed service changes, and many of the final recommendations presented in this document were modified as a result of the comments received on the Preliminary Plan.

The structure of the Final 2006 Service Plan, mirrors that of the Preliminary 2006 Service Plan. **Section I** presents an overview of the service planning process and discusses the context in which the 2006 Service Plan was developed.

Section II includes the service change proposals that were presented in the Preliminary Plan and indicates whether the final recommendations vary from the preliminary proposals. Service recommendations that have not changed since the Preliminary Plan show a “✓” in the margin, and those that have changed are indicated by a “★” in the margin.

Section III carries forward a list of service change requests that were not considered in the Preliminary Plan, because, given limited resources, only the most promising and cost-effective were incorporated.

Section IV reiterates the service change suggestions presented in the Preliminary Plan that should be considered in the future if/when additional resources become available.

Section V outlines the changes to *Service Delivery Policy* that were proposed in the Preliminary Plan and are recommended for implementation.

Section VI presents the results of the Title VI analysis performed on the Final 2006 Service Plan recommendations.

Appendix A includes summary charts showing the analysis of existing services and the final service change recommendations.

Appendix B presents a comparative evaluation of the final service change recommendations.

Appendix C outlines the 2006 Service Plan public process and summarizes the comments received on the Preliminary Plan at the public meetings. A copy of the testimony received at the public hearing can be viewed at the library in the State Transportation Building at 10 Park Plaza, Boston.

The full text of the recommended changes to the *Service Delivery Policy* can be found in **Appendix D**.

I. OVERVIEW

The MBTA Board of Directors adopted the *Service Delivery Policy* in September 1996. This policy defined service standards and outlined a service planning process that uses the service standards to evaluate and modify existing services. The service standards in the *Service Delivery Policy* are as follows: span of service, frequency of service, vehicle loading, schedule adherence, and net cost per passenger.

The first Service Plan was implemented in phases in 1998. This Service Plan resulted in some expansion of service and was the first attempt to ensure that routes operated within the standards defined in the *Service Delivery Policy*. A comprehensive data collection effort preceded the analysis and the recommended modifications were developed using both the public comments on the plan and quantitative analysis.

Development of the second Service Plan began with public outreach in the spring 1999 and concluded with implementation of service changes in the summer of 2002. This plan brought many changes to routes on the North Shore; the first time that these routes had been significantly altered in many years.

The third Service Plan, completed in 2004, included several modifications to services in Quincy and also captured the restructuring of routes in the Waterfront area that occurred due to the introduction of the Silver Line Waterfront.

This is the fourth application of the *Service Delivery Policy* for development of a formal Service Plan. One of the highlights of this plan is the introduction of a commuter service between Chelsea

and Cambridge. This is similar to the new service introduced in the 2004 Service Plan that provided express service between Brighton and Copley Square. That service has proved quite popular and the potential for success the new Chelsea to Cambridge route also seems high. To introduce promising new services existing services have been diminished. Resources made available in this plan are through reductions in service at times or along portions of routes when the demand is light or when the service is duplicative.

In previous years the Service Plan has reviewed the performance of the bus routes only. In response to requests from the public, and as promised during the 2004 planning process, this plan includes an application of the service standards to rapid transit as well as to bus service. A section on how the rapid transit lines performed, along with recommendations for improvements, is found immediately after the bus service recommendations in Section II.

The Preliminary 2006 Service Plan was developed in the context of a changing MBTA bus environment. The Silver Line Waterfront was inaugurated in December 2004 and was extended to the airport in June 2005. With this service came new improved access to two major destinations in Boston: the expanding waterfront and Logan Airport. The Silver Line Waterfront service is provided using dual-mode, articulated vehicles that operate on wire in the tunnel portion of the route and with diesel-electric propulsion on the surface.

In addition, new equipment (either compressed natural gas, or emission-controlled diesel vehicles) has replaced much of the MBTA's older fleet. Two service planning issues have surfaced in

relation to the new equipment. The first is the growing availability of data about the on-time performance of the vehicles. As the software is refined, and more buses equipped with the GPS systems that generate the data, the scheduled times will be altered to better reflect actual performance. This will prove beneficial to the riding public and mention is often made in the plan regarding this. The second issue is that the capacity of the vehicles has changed. With the introduction of low-floor vehicles, the number of seats, and indeed standing room as well, on the 40' vehicles have been reduced. The MBTA will continue to monitor the loads on these vehicles to ensure that sufficient capacity is maintained to meet the load standards.

Because the MBTA's resources are limited, the changes proposed in the Preliminary 2006 Service Plan, and those recommended in the Final 2006 Service Plan, were designed not to create a net increase in resource levels. The goal was to review service performance and to re-allocate resources to better meet the needs of our riders.

Although this plan reviews the cost-effectiveness of both bus and rapid transit, it does not focus on the allocation of resources among the modes. It is also does not discuss the distribution of capital funds.

II. BUS & RAPID TRANSIT SERVICES AND RECOMMENDED SERVICE CHANGES

The recommendations from the 2004 Service Plan resulted in a restructuring of many of the routes that operate from the Quincy garage. Implementation of most of those changes occurred during 2005. Consistent with the MBTA *Service Delivery Policy* this plan is not reporting on these routes and does not reallocate resources amongst these services because it has been such a short time since the implementation of these changes and/or services. In addition the Silver Line, both Washington Street and Waterfront, have seen significant changes since the 2004 plan. Consequently, although information on their performance is included there are no modifications identified.

Changes that were made to other routes based on the past recommendations and where data are not yet available to determine the outcomes are categorized, for analytical purposes, as "improved."

In summary this plan reviews most routes for their compliance with the standards and suggests areas for improvements. In addition, due to community input, several new variations of routes, or entirely new routes are considered.

Appendix A provides a detailed list of each route included in the review and its performance against the service delivery policy standards. Appendix B provides a comparative evaluation of the proposals that are recommended indicating the cost of each new passenger and/or the savings per lost passenger.

This plan is designed to be resource neutral. After the public process some changes in the recommendations are likely, and consequently not all proposals found in this document will be implemented. It is also possible that all changes will not occur due to the inability to successfully reallocate small changes across the region.

The *Service Delivery Policy* as approved by the MBTA's Board of Directors in 1996 also provides for a review of subway service performance. This plan is the first such review and also recommends a number of minor schedule adjustments to address deficiencies identified in the review process. This plan does not include major shifts of resources between existing lines, given the different vehicle types and the permanent infrastructure required to operate each rail route.

The review and recommended service change proposals are as follows.

Route CT1: Boston Medical Center – Central Square

The CT1 is a Crosstown bus that provides limited-stop weekday service between the Boston Medical Center (BMC) and Central Square, Cambridge via Massachusetts Ave. The route supplements service along part of the Route 1 corridor.

This route did not meet the MBTA's schedule adherence standard when last checked in 2000. A number of schedule improvements have already been implemented, and the results of these improvements are still being evaluated.

Route CT2: Sullivan Square – Ruggles via Kendall

The Route CT2 is a limited-stop Crosstown route that operates between Sullivan Square Station and Ruggles Station via Kendall Square and the Longwood Medical Area. This route supplements service along part of the Route 47 corridor.

This route did not meet the MBTA's schedule adherence standard when last checked in 2000. A number of schedule improvements were implemented since then, and the results of these improvements are still being evaluated.

Route CT3: Longwood Medical Area – Andrew via Ruggles

The Route CT3 provides limited-stop weekday service between the Longwood Medical Area and Andrew Station via Ruggles Station and the Boston Medical Center. It supplements service along part of the Route 8 corridor.

This route does not meet the MBTA's schedule adherence standard. As more detailed run time data become available, adjustments will be made to the schedule through the quarterly process of service changes.

Route 1: Dudley – Harvard via Mass. Ave.

This route provides service between Dudley and Harvard Stations with connections to the Red, Orange, Green, and Silver Lines.

The most recent ridership count from Winter 2003 identified a number of instances when passenger loads exceeded the loading standard; however, no further changes are recommended. Either service has already been

improved, ridership was not problematic when further observations were taken, or the loading standard was narrowly missed with a few standees on average rather than heavy crowds.

This route does not meet the MBTA's schedule adherence standard. New run-time data have been collected using GPS-equipped buses, and schedule modifications will be implemented with an upcoming schedule change.

Route 4: WTC – North Station

Route 4 is a commuter route providing weekday service between North Station and the South Boston Waterfront.

This route does not meet the MBTA's schedule adherence standard. As more detailed run time data become available, adjustments will be made to the schedule through the quarterly process of service changes. The route has been restructured since the most recent ridership counts were taken; no further changes are recommended until new counts are taken.

Route 5: McCormack Housing Development – City Point via Andrew

✓ ***MODERATE Change Recommended, As Found in Preliminary Plan***

Route 5 is a community circulator route that provides weekday transit access to residents of the McCormack Housing Development.

The route does not meet the service standards for span, frequency, or schedule adherence. No change is recommended for the span, since Routes 10 and 16 provide service along the Route 5 corridor in the remaining portions of the service day. In order to meet the headway standard, it is

recommended that the first trips be shifted 15 minutes later and that a uniform hourly headway run all day. The most recent passenger count from November 2004 identified an inbound run time issue; however, this was most likely the result of a mismatch between the actual last stop and the official last stop. This mismatch was corrected in Winter 2005. As more detailed run time data become available, adjustments will be made to the schedule through the quarterly process of service changes.

It is recommended that the route be extended to JFK/UMass Station, but continue to terminate at McCormack Housing. This would allow for connections to the grocery store and to the UMass and Kennedy Library shuttle buses, while maintaining the emphasis on serving McCormack Housing. This change is expected to add 4.0 miles and no hours of service, since the additional run time can be accommodated within the existing schedule. This change is expected to attract 15 new weekday and Saturday customers.

There was a separate request for a routing change that is not recommended, details are found in section III.

Route 6: South Boston Waterfront – Haymarket

✓ ***MINOR Change Recommended, As Found in Preliminary Plan***

Route 6 is a commuter route that provides weekday service between the North End and the South Station.

This route does not meet the MBTA's schedule adherence standard. As more detailed run time data become available, adjustments will be made to the schedule through the quarterly process of service changes.

Due to requests for later service, it is recommended that the first trip of the afternoon in each direction be shifted to the end of the evening period. New trips from Haymarket at 5:50 PM and from South Station at 6:10 PM would replace the existing trips at 2:55 PM and 2:40 PM, respectively. The existing afternoon trips carried 3 passengers total when last checked in 2004, of which 2 passengers traveled exclusively in the portion of the route that was discontinued and replaced by the Silver Line Waterfront. It is expected that the later service would attract 10 passengers total, or a net of 9 new passengers. There would be no change in hours or miles of service.

Route 7: South Boston – Downtown via South Boston Waterfront

Route 7 provides service six days a week between the residential neighborhoods of South Boston and the Downtown/Financial District area via the South Boston Waterfront.

This route does not meet the MBTA's schedule adherence standard. A number of run time adjustments are being made for the Winter 2006 schedule to improve on-time performance.

There were several requests for route changes that are not recommended at this time. Please see section III for further discussion.

Route 8: UMass Boston – Kenmore via JFK/UMass, Dudley

★ ***MINOR Change Recommended, ALTERED from Preliminary Plan***

Due to concerns about traffic on Harrison Ave, the proposal to reroute outbound buses off of Washington St and

onto Harrison Ave is on hold until a more extensive run time analysis can be conducted. The Sunday change has been postponed due to concerns regarding the long headways. The weekday proposal to extend more service into the South Bay Center is still recommended.

Route 8 is a local route that provides circumferential service between UMass and Kenmore Station via JFK/UMass Station, the South Bay Center, Newmarket, BU Medical Center, Dudley Station, Ruggles Station, and the Longwood Medical Area.

This route does not meet the MBTA's schedule adherence standard. Since this route operates using GPS-equipped buses and since there are frequent reports of reliability issues, the Route 8 will be a priority when analyzing run times using the new equipment. Run time adjustments will be made, as possible, through the quarterly process of updates.

It is proposed that the outbound route travel via Melnea Cass Blvd. and Harrison Ave., rather than via Washington St., E. Brookline St., and a short stretch of Harrison Ave. This proposal primarily addresses noise and traffic complaints from abutting residents on East Brookline St., but there may be a number of ancillary benefits to transit users. This change would make the outbound Route 8 travel on the same roads opposite the inbound Route 8 and CT3 in the Boston Medical Area where possible, thus making it more understandable. It would also make the route more direct by saving 0.4 miles and 2-3 minutes of travel time per vehicle-trip. 74 passengers board and 188 passengers alight along the portion of the route that would no longer be served. Of these 262 total passengers,

103 (39 %) are within 0.15 miles or a 3-minute walk of an existing bus stop on the new route, 82 (31 %) are within 0.15 miles of a potential new bus stop (requiring approval from the Boston Transportation Department), and 76 (30 %) are 0.15 – 0.3 miles or a 3- to 6-minute walk from an existing bus stop. This change is anticipated to reduce aggregate weekday passenger in-vehicle travel time by 22 hours, although some passengers would experience an additional 12 aggregate hours of walking. It is estimated that 30 passengers would be deterred by the longer walking time, but that 38 passengers would be attracted by the reduced through-travel time. It is unclear how the simplified route, change in reliability, and not using the Silver Line's improved bus stop facilities along Washington Street will affect ridership.

In a separate proposal, there have been requests for earlier service into the South Bay Center on weekdays and for both earlier and later service on Sundays. Earlier weekday service to the mall on weekday inbound trips is not recommended due to very heavy ridership inbound from 7:45 AM – 8:45 AM. However, outbound trips at 7:58 AM, 8:22 AM, 8:34 AM, 8:46 AM, and 8:58 AM could be modified to serve the mall without changing any scheduled departure times. This would add approximately 0.5 hours of weekday service and 3.0 miles with the existing vehicles and is expected to attract 20 new mall customers. On Sunday mornings, service currently operates every 45 minutes. Adding mall service from 9:00 AM – 12:00 PM would require reducing the frequency to every 50 minutes. Doing so would attract approximately 40 new passengers,

although an estimated 6 existing passengers would be deterred by the frequency change. This would have the result of shifting afternoon trips twenty minutes later, which would make them match the Saturday afternoon trip times. One additional evening round trip into the mall on Sunday evenings would operate by having the new 7:30 PM trips inbound and outbound run into the mall.

Route 9: South Boston – Copley Square via Broadway

✓ ***MINOR Change Recommended, As Found in Preliminary Plan***

Route 9 is a local route that provides service between Copley Square and South Boston via W. Broadway and Broadway Station.

This route does not meet the MBTA's schedule adherence standard. As more detailed run time data become available, adjustments will be made to the schedule through the quarterly process of service changes.

Given the strong ridership on this route in the evenings relative to the Route 11, there is a proposal to break the interline between the two routes and shift more service onto the Route 9. Currently, Routes 9 and 11 share three buses every 30 minutes in the evenings. This change would place two buses onto the Route 9 and one bus onto the Route 11 during these periods. This change would add 2.4 hours weekday, Saturday, or Sunday service and would improve the headway from every 30 minutes to every 22 minutes. This change is expected to attract 39 new passengers on weekdays, 36 on Saturdays, and 31 on Sundays; however some Route 11 riders would no longer use the service. Although the new headway would be shorter, it would

eliminate the 30-minute headway, which is easier to remember.

There is a separate request for a routing change that is not recommended. Please see section III for more details.

Route 10: South Boston – Copley Square via Andrew

Route 10 is a local route that provides service between Copley Square and the residential areas of South Boston via Back Bay Station, the B.U. Medical Center, and Andrew Station.

This route does not meet the MBTA's schedule adherence standard. As more detailed run time data become available, adjustments will be made to the schedule through the quarterly process of service changes.

There is a separate request for a routing change that is not recommended. Please see section III for more details.

Route 11: Bayview – Downtown via Broadway

★ ***MINOR Change Recommended, ALTERED from Preliminary Plan***

Due to budgetary constraints caused by changes elsewhere within the plan, the Sunday service change will be modified slightly. Sunday night service will be extended to operate downtown, but the transition from 30-minute headways to 45-minute headways will shift slightly.

Route 11 provides service between the Bayview area of South Boston and Downtown Boston via Broadway Station and Chinatown.

This route does not meet the MBTA's schedule adherence standard. New run-time data have been collected using GPS-equipped buses, and schedule

modifications will be implemented with an upcoming schedule change.

Due to requests for later service to Bedford & Chauncy Sts., South Station, and A St., it is recommended that evening service be restructured. From 8:00 PM – 9:00 PM on weekdays and Saturdays, and from 7:00 PM – 9:00 PM on Sundays, service would operate every 25-30 minutes and would be extended into downtown rather than terminating at Kneeland St. After 9:00 PM, service would also be extended downtown but would operate every 45 minutes.

Although some riders would be deterred by the less frequent service after 9:00 PM, this would be offset by the extension to downtown and the reduced number of route variations. This change is expected to attract a net new 11 weekday passengers, 6 Saturday passengers, and 25 Sunday passengers.

Route 14: Roslindale Square – Heath Street Loop via Dudley Station

- ✓ ***MODERATE Change Recommended, As Found in Preliminary Plan***

Route 14 linked Roslindale Square with Dudley Station until the Spring of 2002, when it was merged with old Route 46 (Dudley Station-Heath Street Loop) to form the present Route 14.

Schedule adjustments will be implemented through the regular quarterly service changes to improve on-time performance. The route fails the frequency standard because it runs every 35 minutes in the PM peak, instead of every 30. This headway change will not be pursued, as it would require the addition of a bus in the PM peak, at an estimated daily cost of \$40 per each new rider.

The first trip to leave Roslindale does so at 6:30 AM and carries 55 riders, making it the second-busiest trip of the day. It is recommended that the short trip that leaves Dudley at 6:30 AM be changed to a full trip leaving Roslindale at 6:00 AM. This change is expected to attract 10 additional riders.

Route 15: St. Peter's Square – Ruggles via Dudley

Route 15 is a local route connecting St. Peter's Sq. and Kane Sq. with Dudley Station and Ruggles via Uphams Corner.

This route does not meet the MBTA's schedule adherence standard. Since this route operates using GPS-equipped buses and since there are frequent reports of reliability issues, the Route 15 will be a priority when analyzing run times using the new equipment. Run time adjustments will be made, as possible, through the quarterly process of updates.

There is a separate request for a routing change that is not recommended. Please see section III for more details.

Route 16: Forest Hills – Andrew Station via Uphams Corner

Route 16 is a local route, which operates between Forest Hills and Andrew Stations via Columbia Rd. and Uphams Corner.

This route does not meet the loading standard on Saturdays from 5:00 PM to 6:00 PM, since the average maximum load was 42 (the standard calls for 39). Given how narrowly the route misses the standard and that it failed due to having standees rather than crowds, no change is recommended. This route also does not meet the MBTA's schedule adherence standard. A number of

schedule adjustments will be implemented, beginning with the Winter 2006 schedule.

Route 17: Fields Corner – Andrew Station via Kane Square

Route 17 is a local route that provides service between Fields Corner and Andrew Station via Kane Sq., Uphams Corner, and Edward Everett Sq.

This route does not meet the MBTA's schedule adherence standard. As more detailed run time data become available, adjustments will be made to the schedule through the quarterly process of service changes.

Route 18: Ashmont – Andrew via Dorchester Ave.

- ✓ ***MINOR Change Recommended, As Found in Preliminary Plan***

Route 18 is a local route that operates between Ashmont and Andrew Stations via Dorchester Ave. This route functions as a local distributor, since most long trips in this corridor would be on the Ashmont branch of the Red Line.

This route does not meet the MBTA's span, frequency, cost effectiveness, or schedule adherence standards. In order to bring the schedule into compliance with the span and frequency standards, it is recommended that 2.1 hours and 16.8 miles be added to the schedule on weekdays. This change is anticipated to attract 22 new weekday passengers due to the frequency improvement and 30 new passengers due to the span change. However, the route fails the cost-effectiveness standard on Sundays due to very low ridership when last counted in 2000. There were 91 Sunday boardings, or an average of 6 boardings per trip. If future ridership counts remain low, then

discontinuing Sunday Route 18 service may be considered. To improve the schedule adherence, adjustments will be made to the schedule through the quarterly process of service changes as more detailed run time data become available.

There is a separate request for a routing change that is not recommended. Please see section III for more details.

Route 19: Fields Corner – Ruggles via Geneva Ave.

Route 19 is a local route that operates from Fields Corner to Ruggles via Geneva Ave. and Warren St.

This route does not meet the MBTA's schedule adherence standard. New run-time data have been collected using GPS-equipped buses, and schedule modifications will be implemented with an upcoming schedule change.

Route 21: Ashmont – Forest Hills

Route 21 connects Forest Hills and Ashmont by way of Morton Street. Route 21 operates daily (Sunday service was inaugurated in March of 2002).

No action on schedule adherence is recommended until new data can be collected. The route does not meet the guidelines for the span of Sunday service, but Sunday ridership is very light and increasing Sunday service would put the route in danger of failing the cost standard, so no action is recommended.

A suggestion to run service later on weekdays and Saturdays is not recommended and can be found in section III.

Route 22: Ashmont – Ruggles via Grove Hall

Route 22 is a local route, which operates from Ashmont Station to Ruggles Station with service to Codman Sq., Talbot Ave., Blue Hill Ave., and Grove Hall.

This route does not meet the MBTA's schedule adherence standard. As more detailed run time data become available, adjustments will be made to the schedule through the quarterly process of service changes.

Route 23: Ashmont – Ruggles via Codman Square

Route 23 provides local bus service between Ashmont Station and Ruggles Station via Codman Sq., Grove Hall, and Dudley Sq.

The most recent route observation identified a number of time periods where passenger loads exceeded the loading standard. However, service during each of these time periods has been improved already as a result of the observations. No further changes are recommended.

This route does not meet the MBTA's schedule adherence standard. Since this route operates using GPS-equipped buses and since this is one of the busiest routes in the MBTA's bus system, the Route 23 will be a priority when analyzing run times using the new equipment. Run time adjustments will be made, as possible, through the quarterly process of updates.

**Route 24: Wakefield and Truman – Mattapan &
Route 27: Ashmont – Mattapan**

Route 24 connects Wakefield Ave. and Truman Highway to Mattapan, while route 27 connects Mattapan to Ashmont along River Street and Dorchester Ave. They operate as the combined route 24/27 on nights and weekends, a change introduced in the 2004 service plan.

Schedule changes have been made on both routes in response to recent schedule adherence problems, and no further action is recommended until additional data is collected.

A suggestion to combine routes 24 and 27 entirely, through-routing most trips and identifying the entire route as Route 27, should be looked at in the future and is discussed in Section IV. This change could also address the frequency standard issue of Route 27.

A suggestion to extend route 24 across the street to the nearby Stop & Shop is not recommended and is discussed in section III.

Route 26: Ashmont – Norfolk & Morton Belt

Route 26 operates daily, for the full service day on weekdays and Saturday, and from 9 AM – 9 PM on Sundays. In the 2004 service plan it was extended to Blue Hill Avenue at times when the 21 is not operating.

Slight schedule adjustments are needed to address on-time performance issue.

Route 28: Mattapan – Ruggles

✓ *MINOR Change Recommended,
As Found in Preliminary Plan*

Route 28 serves the Blue Hill Avenue corridor. It links the Orange Line,

Commuter Rail, Silver Line, and Mattapan Trolley.

Due to crowding observed when this route was most recently checked, it is recommended that an additional 3.5 hours of service be provided from 3:45 PM to 7:15 PM. This would allow the outbound headway to be improved from every 8 minutes to every 7/8 minutes in the PM peak. This change is expected to attract 42 new passengers due to the frequency improvement, while bringing the average passenger load to within acceptable levels.

This route does not meet the MBTA's schedule adherence standard. Since this route operates using GPS-equipped buses and since this is one of the busiest routes in the MBTA's bus system, the Route 28 will be a priority when analyzing run times using the new equipment. Run time adjustments will be made, as possible, through the quarterly process of updates.

Route 29: Mattapan – Ruggles; Mattapan – Jackson Square

Route 29 links Mattapan Station and Blue Hill Avenue to the Orange Line, at Jackson Square all the time and also at Ruggles at night and on weekends.

Minor schedule adjustments are recommended to improve on-time performance.

Route 30: Forest Hills or Roslindale Sq. – Mattapan

Route 30 connects Forest Hills and Mattapan by way of Roslindale Square and the Cummings Highway.

In the 2004 service plan the route was simplified, serving Forest Hills all the time instead of sometimes serving Forest

Hills and sometimes serving Ashmont. No further action is recommended until new data are collected.

Route 31: Mattapan – Forest Hills

Route 31 links Mattapan Station with the Orange Line at Forest Hills, by way of Morton Street, for the full span of MBTA service.

Schedule changes have been made to route 31 since data was last collected, and no action on schedule adherence is recommended until new data are collected.

Route 32: Wolcott Square – Forest Hills

✓ ***Moderate Change Recommended, As Found in Preliminary Plan***

Route 32 serves the Hyde Park Avenue corridor daily for the full service day. When weekday service is provided, short route trips that only go as far as Cleary Square supplement the trips that go all the way to Wolcott Square.

Route 32 fails the schedule adherence standard, but no adjustments to the schedule are recommended until additional data can be collected.

Like many routes, route 32 has more service in the fall, winter and spring than it does in the summer, to accommodate the increased ridership during the school year. In response to crowding complaints and requests for additional service on the route in the summer, it is proposed that the summer service be increased to the level of service in the fall, winter and spring, with the exception of the 14 trips that run only on school days.

Route 33: River & West Milton Sts – Mattapan Station

✓ ***MINOR Change Recommended, As Found in Preliminary Plan***

Route 33 links Mattapan Station with Cleary Sq./Hyde Park Ave. and residential areas of Dedham and Readville. Weekday mornings, and all day Saturdays, the Dedham loop is served clockwise. Weekdays after noon, it is served counterclockwise.

Only minor running-time adjustments are needed to address schedule adherence problems.

The first weekday inbound trip on route 33 leaves at 6:15AM carries 31 riders, 28 of whom board the route before Cleary Square. This suggests a demand for early service, so an additional trip is proposed at 5:45AM.

Route 34: Dedham Line – Forest Hills Station & Route 34E: Walpole – Forest Hills

Route 34 provides local service on Washington Street south of the Forest Hills station. Service is dovetailed, to the extent practical, with Route 34E, which runs from Walpole to Forest Hills via Washington Street.

Minor schedule adjustments are recommended for the 34 and 34E on weekdays to address schedule adherence issues. More data are needed for Saturday and Sunday adjustments.

A request for additional Walpole Street service and a request for additional late night service are not recommended and are discussed in Section III.

Route 35: Dedham Mall – Forest Hills &

Route 36: Charles River Loop or VA Hospital – Forest Hills

✓ ***MINOR Change Recommended, As Found in Preliminary Plan***

These two routes link Forest Hills and Dedham/West Roxbury via the Belgrade Ave. and Centre Street corridors. Route 36 provides service for the entire service day. Route 35 operates daily, until about 9:00 PM weekdays and Saturdays, and from about 10:00 AM-6:00 PM on Saturdays.

To address on-time performance problems, route 35 should be run every 35 minutes on Saturdays between 10:00 AM and 1:59 PM to allow more running time. It is estimated that 29 riders will be lost due to the longer headway; however, the reliability improvements should offset much of that loss. Minor running-time adjustments are also recommended.

A proposal regarding Route 35 service on Stimson Street is not recommended and can be found in Section III.

Route 37: Baker & Vermont Sts – Forest Hills Station & Route 38: Wren Street – Forest Hills Station

Route 37 links West Roxbury with the Forest Hills Station via Belgrade Avenue and Washington Street. Route 38 links West Roxbury with the Forest Hills Station via Centre Street and Faulkner Hospital. During early morning Saturdays, and all day Sundays, these routes run as the combined 37/38.

Route 37's on-time performance on Saturdays, Route 38's on-time performance on weekdays and Saturdays, and Route 37/38's on-time performance on Sundays can be improved with minor running time

adjustments. More data is needed to assess Route 37's weekday on-time performance.

Route 38's Saturday ridership is low, although it does pass the cost standard. If an opportunity arises in the future to interline it with another route and run it every hour instead of every 40 minutes, it should be pursued. (Combining the 37 and the 38 on Saturdays is not recommended, as the frequency of service along Belgrade Ave. and Centre Street would worsen considerably on a day when that area has over a thousand riders.)

Route 39: Forest Hills – Back Bay

Route 39 connects Forest Hills and Copley Square by way of Centre and Huntington Streets in Jamaica Plain. It is one of the MBTA's busiest routes.

Route 39 fails the schedule adherence standard. Changes have been made to the schedule since the data was last collected, but given the route's length and traffic conditions it will always be difficult for this route to pass the standard.

Route 39 proposals that are not recommended are discussed in Section III.

Route 40: Georgetowne – Forest Hills & Route 50: Cleary Square – Forest Hills

- ✓ ***MODERATE Change Recommended, As Found in Preliminary Plan***

Routes 40 and 50 both serve Forest Hills, Washington Street and Roslindale Square. From there Route 40 serves more of Washington Street and Georgetown, while Route 50 goes to Cleary Square. The 2004 Service Plan

introduced a new Sunday service on both routes, running in a loop: from Forest Hills, outbound on Route 40, and inbound on Route 50.

Route 40 fails the load standard on weekdays, due to one crowded trip at 2:30PM and an average of 4 standees in the early morning. The schedule adherence standard reflects the need for minor adjustments to the running time, but not significant schedule changes.

On Saturday it is proposed to eliminate the last two Route 40 and last two Route 50 round-trips and replace them with four 40/50 combined trips. This will increase the span of service by two hours and is expected to add 27 riders at virtually no cost.

Route 41: Centre and Eliot Streets/JP Monument – JFK U Mass Station

This route links the Jamaica Plain area, Dudley Station, Uphams Corner and JFK/UMass.

Minor schedule adjustments will be implemented through the regular quarterly service changes to address schedule adherence problems.

Route 43: Ruggles – Park Street via Tremont

Route 43 provides local service between Ruggles Station and Park St. Station via Tremont St. in the Back Bay

This route does not meet the MBTA's schedule adherence standard. As more detailed run time data become available, adjustments will be made to the schedule through the quarterly process of service changes.

Route 44: Jackson Sq. Station – Ruggles Station

Route 44 provides local service between Jackson Sq. Station and Ruggles Station via Humboldt Ave. and Dudley Sq.

This route does not meet the MBTA's schedule adherence standard. Since this route operates using GPS-equipped buses and since this is has received a number of reliability complaints, the Route 44 will be a priority when analyzing run times using the new equipment. Run time adjustments will be made, as possible, through the quarterly process of updates.

Route 45: Franklin Park – Ruggles via Blue Hill Ave.

Route 45 provides local service along Blue Hill Ave. between Franklin Park and Ruggles Station.

This route does not meet the MBTA's schedule adherence standard. Since this route operates using GPS-equipped buses and since this is has received a number of reliability complaints, the Route 45 will be a priority when analyzing run time data collected using the new equipment. Run time adjustments will be made, as possible, through the quarterly process of updates.

Route 47: Broadway – Central Square via BUMC, Dudley

Route 47 provides daily circumferential service between Broadway Station and Central Square, Cambridge via the Boston Medical Center, Dudley Station, Ruggles Station, and the Longwood Medical Area.

This route does not meet the MBTA's schedule adherence standard. Since this route operates using GPS-equipped

buses and since this is has received a number of reliability complaints, the Route 47 will be a priority when analyzing run time data collected using the new equipment. Run time adjustments will be made, as possible, through the quarterly process of updates.

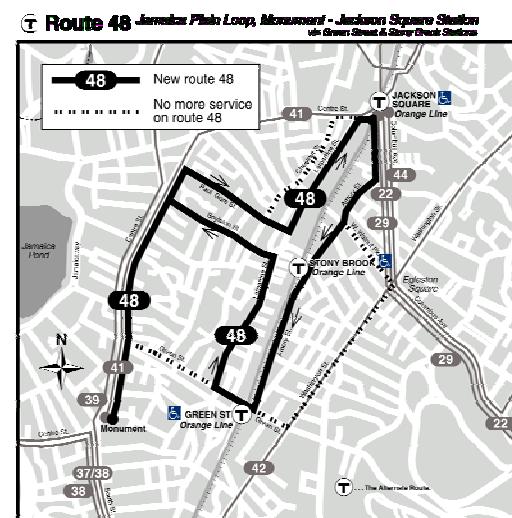
Route 48: Jamaica Plain Loop

★ *MINOR Change Recommended, ALTERED from Preliminary Plan*

The MBTA did not receive any suggestions that would improve this service. A minor route modification was made to improve reliability.

This community circulator route serves the Jamaica Plain commercial and residential areas weekdays and Saturdays. It links the JP Monument with the Orange Line via local streets.

Route 48 was changed in 2005 in an unsuccessful attempt to address operational difficulties. It is not clear what the future of route 48 should be, and the MBTA wishes to solicit further input and suggestions from the community to determine whether there is a responsible way to preserve the route. The following map shows the current and previous routes.



Route 48 was introduced in a 1970s experiment with minibuses. It predates the current alignment of the Orange Line, which cuts down its middle. The entire route is within a quarter-mile of subway or bus service. Despite being in one of the densest areas of the MBTA service area, Route 48 has low ridership and fails the net-cost-per-passenger standard at \$6.84 per passenger on weekdays. However, Route 48 does provide the only direct service to the senior housing at Amory Street Apartments at Amory Street and West Walnut Park; without it the walk to the nearest bus stop is just under a quarter-mile.

Route 48 operates on small, tight streets where turns are difficult. Until recently it had operated with 35-foot high-floor diesel buses, which are narrower than the regular 40-foot MBTA buses and could more easily negotiate tight turns. Unfortunately, the 35-foot buses are no longer made, and operating the old route with the 40-foot buses led to almost daily diversions, as legally parked cars prevented the buses from making certain turns. Route modifications implemented to address this issue have not been successful, and the diversions continue. Additional changes are therefore recommended; however, the street network makes any change difficult.

One option would be to divert Route 29 to the Amory Street Apartments in the midday. This would only be possible if 1-2 parking spaces were removed (which would be at the discretion of the city), assuming that the streets would then be clear enough for a bus to pass. If however the streets were blocked, Route 29 would become unreliable. This change would also require stretching the Route 29 headway from 60 to 65

minutes in the late morning and early afternoon, a violation of the frequency standard. 240 riders would have slightly longer wait causing a loss of about 11, and 215 riders would experience an additional 1-3 minutes in travel time.

Route 51: Forest Hills – Cleveland Circle

Route 51 is a local route that provides service between the Forest Hills station on the Orange line and Cleveland Circle on the Green Line.

Minor running-time adjustments will be implemented through the regular quarterly service changes to address schedule adherence problems.

A request to add service to the PM peak is not recommended and is discussed in Section III.

Route 52: Dedham Mall – Watertown Yard

This route links several bus corridors and the Green Line Newton Centre station with largely residential areas of Newton and West Roxbury.

More running time is needed on weekdays in both directions in the AM peak and outbound in the PM peak to address schedule adherence concerns, but additional data is needed to determine how much. More data is also needed to determine what schedule adjustments are needed on Saturday. The route fails the frequency standard on Saturdays, but any action on this front would increase the cost of a route that already fails the cost standard. Route 52 fails the cost standard on weekdays as well, but no cuts are recommended, as eliminating the route would leave sizable areas without transit, and cutting midday service would put the route in violation

of the frequency standard. The last few trips could be cut, but their ridership is no less than at other times.

A suggestion to add service to this route is not recommended and is discussed in Section III.

Route 55: Fenway – Park Street via Copley

Route 55 is a local route that provides service between the Fenway neighborhoods and the Green Line, either at Copley Square or Park St. Station.

This route does not meet the MBTA's schedule adherence standard. As more detailed run time data become available, adjustments will be made to the schedule through the quarterly process of service changes.

Route 57: Watertown – Kenmore via Oak Square

Route 57 provides service between Watertown and Kenmore Station via Oak Square, Brighton Center, and Union Square in Allston.

This route does not meet the MBTA's loading or schedule adherence standards. A number of improvements have been made to address loading concerns: no further changes are recommended. Because this route now operates using some GPS-equipped buses, as subsequent data become available, analysis of the run times will be conducted and additional changes introduced if warranted.

Route: Needham Junction – Watertown Square via Newton

Route 59 provides weekday and Saturday service between Needham Junction and Watertown Square via

Newton Highlands and Newtonville.

This route does not meet the MBTA's span or frequency standards on weekends. However, no schedule adjustments are recommended. Because this route now operates using some GPS-equipped buses, as subsequent data become available, analysis of the run times will be conducted and additional changes introduced if warranted.

There was a separate request to modify the Needham St variant trips to travel via Highland Ave and Gould St and omit Newton Upper Falls and part of Central Ave in Needham; however, this extension is not recommended and is discussed in section III.

Route 60: Chestnut Hill – Kenmore Square via Boylston St.

Route 60 provides service between Chestnut Hill and Kenmore Square via Boylston St. in Brookline and via Brookline Ave. in Boston.

This route does not meet the MBTA's schedule adherence standard. Because this route now operates using some GPS-equipped buses, as subsequent data become available, analysis of the run times will be conducted and additional changes introduced if warranted.

There was a separate request for a routing extension that is not recommended. Please see section III for more details.

Route 62: Bedford V.A. Hospital – Alewife via Arlington

This route connects the Bedford V.A. Hospital with Mass. Ave. in Lexington and Arlington, Arlington Heights, Route 2 and Alewife Station.

Route 62 fails the span, schedule and

adherence standards. No action is recommended on the span failure, which is the result of the first morning inbound trip arriving at Alewife at 7:10 AM instead of by 7:00 AM. To change this would mean shifting many of the day's trips, which would be disruptive, and the route has significant overlap with route 76 which starts earlier. The schedule has been adjusted to address schedule adherence concerns, and no change is recommended in response to this, or for the cost standard, until new data can be collected.

A request for additional service is not recommended and is discussed in section III.

Route 62/76: Bedford V.A. Hospital – Alewife via Hanscom

This route is a hybrid of Routes 62 and 76 operating on Saturdays only, when there is not enough demand to justify running the routes separately, but there is too much demand to eliminate them. Route 62/76 connects the Bedford V.A. Hospital with Hanscom Air Force Base and Hanscom Air Field in Lexington, Mass. Ave. in Lexington and Arlington, Arlington Heights, Route 2 and Alewife Station.

Route 62/76 fails the frequency and schedule adherence standards, but no action is recommended until newer data can be collected.

Route 64: Oak Square – Central Square

★ NEW MINOR Change Recommended

To facilitate a change in service on Route 85, Route 64 service in the morning rush hour will change from every 23 minutes to every 25 minutes.

This route connects Oak Square in Brighton with Beacon and Cambridge Streets, Central Square in Cambridge, and Kendall or University Park, depending on the time of day.

Schedule adjustments have been made that are expected to address weekday schedule adherence problems. More data are needed to address Saturday and Sunday schedule adherence concerns.

Route 65: Brighton Center – Kenmore via Brookline

Route 65 provides weekday and Saturday service between Brighton Center and Kenmore Station via Brookline Village and the Longwood Medical Area.

This route does not meet the MBTA's load or schedule adherence standard. A number of schedule adjustments have already been implemented to address the loading concerns. Because this route now operates using some GPS-equipped buses, as subsequent data become available, analysis of the run times will be conducted and additional changes introduced if warranted.

Route 66: Harvard – Dudley via Allston

Route 66 provides circumferential service between Dudley and Harvard Stations via Brookline Village and Union Sq., Allston.

This route does not meet the MBTA's loading standard; however, no additional service is recommended, since the loading misses the midday standard by having standees but not excessive crowds from 9:00 AM – 10:00 AM weekdays and 4:30 PM – 5:30 PM Sundays. Route 66 also fails the schedule adherence standard. Because this route now operates using some GPS-equipped buses, as subsequent data become available, analysis of the run times will be conducted and additional changes introduced if warranted. Furthermore, as the new Computer Aided Dispatch /Automated Vehicle Location (CAD/AVL) system begins operating, it is recommended that the Route 66 will be a high-priority for increased monitoring, given the considerable variability in run times on this route.

Route 67: Turkey Hill – Alewife via Arlington Center

This route connects Turkey Hill, the old Arlington Symmes/Lahey Clinic site, and Arlington Center to Alewife.

Route 67 fails the schedule adherence standard, but no action is recommended until newer data can be collected.

Route 67 proposals that are not recommended are discussed in section III.

Route 68: Harvard – Kendall via Broadway

This route connects Harvard, Union and Kendall Squares along Broadway in Cambridge.

Route 68 fails the schedule adherence standard. Minor running-time adjustments will be implemented

through the regular quarterly service changes to improve schedule adherence.

A proposal that is not recommended for implementation is discussed in section III.

Route 69: Lechmere – Harvard

This route connects Harvard, Inman Square and Lechmere along Cambridge Street.

Changes have been made to the weekday and Sunday schedules to address schedule adherence problems. More data is needed to address Saturday schedule adherence problems.

Routes 70 and 70A: Waltham-Central Square

Routes 70 and 70A connect Central Square, Waltham to Watertown Square, the Arsenal Mall and Central Square, Cambridge by way of Main Street, Arsenal Street and Western Ave. Route 70 also serves Cedarwood, and route 70A also serves North Waltham.

Routes 70 and 70A have had schedule adherence and load problems, made worse recently by construction in Waltham that has since abated. No adjustments are recommended until additional data is available. 70A fails the frequency standard on weekdays and the span standard on Saturdays, but no action is recommended, as the majority of the route overlaps with the 70, which passes those standards.

Several changes to the 70 and 70A are not recommended and are discussed in Section III.

Route 71: Watertown Square – Harvard via Mount Auburn St.

This route is a Trackless Trolley (electric

bus) route connecting Watertown Square and Mount Auburn Street in Watertown to the Mount Auburn Hospital and Harvard.

Changes have been made to address weekday schedule adherence concerns, but more data are needed to address Saturday and Sunday concerns.

A request to divert some Route 73 service to Route 71 is not recommended and is discussed in Section III.

Route 72: Aberdeen Ave. – Harvard Square

This route connects Aberdeen and Huron Avenues in Cambridge to Concord Ave. and Harvard Square.

Schedule changes are being made in the weekday PM peak to address schedule adherence problems. Minor running-time adjustments will be implemented through the regular quarterly service changes to improve Saturday schedule performance.

Route 72/75: Belmont – Harvard

This route is a hybrid of routes 72 and 75 operating only on Saturday evenings and Sundays, when there is not enough demand to justify running the routes separately, but too much demand to eliminate them outright. It connects Belmont Center and points in Belmont and Cambridge south of Fresh Pond to Harvard Station.

Minor running-time adjustments will be implemented through the regular quarterly service changes to improve schedule adherence on both Saturday evenings and Sundays.

Route 73: Waverley – Harvard via Mount Auburn

This route connects Waverley Square to Cushing Square, Belmont Street, Mount Auburn Hospital and the Red Line.

Newer data is required to address schedule adherence concerns.

Route 74: Belmont Center – Harvard &

Route 75: Belmont Center – Harvard

★ NEW MINOR Change Recommended

In order to facilitate cost-saving measures on Route 78 while minimizing impact on customers, the following changes will be made to Routes 74 and 75 on weekdays between 9:45 AM and 1:45 PM: Route 74 will run twice an hour instead of once an hour, and Route 75's departure times will change.

These routes connect Belmont Center and points in Belmont and Cambridge with Harvard Square. Route 74 operates north of Fresh Pond, while route 75 operates south of it. On Saturday evenings and Sundays route 75 is combined with route 72 to form route 72/75.

Route 75 is essentially a variant of the 74, and while the 75 fails the span standard on weekdays and the frequency standard on both weekdays and Saturdays, the combined portion of the routes passes these standards. Running-time analysis suggests schedule adjustments may be necessary in the early evening on weekdays, in addition to running-time adjustments on Saturday, but more data is being collected to confirm that the correct changes are made.

Although route 74's ridership has declined significantly since 1998, it still passes the cost standard, and no reductions in service are recommended at this time.

Route 76: Hanscom – Alewife via Arlington

This route connects Hanscom Air Force Base and the Civil Air Field in Lexington, Mass. Ave. in Lexington and Arlington, Arlington Heights, Route 2 and Alewife.

Route 76 underwent several changes leading up to the previous service plan, some of which were to address schedule adherence problems. Although the route fails the cost standard, no changes are recommended until additional data are collected and more time has passed.

Route 77/77A: Arlington Heights – Harvard via Mass. Ave.

Route 77 connects Arlington Heights, Arlington Center, North Cambridge, Porter Square and Harvard Square all along Mass. Ave. Route 77A runs from North Cambridge to Harvard. Route 77A is a Trackless Trolley (electric bus) route that supplements Route 77 and that moves the electric buses between their garage in North Cambridge and Harvard Square, where their routes start.

In the 2004 Service Plan the role of the 77A in relation to the 77 was changed, the approach to coordinating the 77's schedule with the 79's was changed, and Route 77 service on Saturday was increased. More time is needed to assess the impact of these actions, and no change is recommended.

Suggestions to add more service and to extend the route to Hynes Convention

Center are not recommended and can be found in Section III.

Route 78: Arlmont – Harvard via Blanchard

★ ***MODERATE Change Recommended, ALTERED from Preliminary Plan***

Due to the overwhelmingly negative reaction to the significant reduction in the span of service that were proposed, as well as the impacts this would have on Route 74 coordination, this proposal will not be implemented. Instead, the following change will be made on weekdays: the last trip (which carries no riders on a typical day) will no longer operate, and service between 9:45 AM and 1:45 PM will operate every hour instead of every half-hour. Frequency will be improved on Route 74, which overlaps much of Route 78, but is shorter and less expensive to operate. As a result, customers on Concord Ave will not see degradation of service. On Sunday, only the first and last trips will cease operation, and there will be no changes to service on Saturday.

This route connects Arlmont Village, Arlington Heights, Park Circle and points along Blanchard Road and Concord Ave. to Harvard Square.

Route 78's ridership has declined significantly and it now fails the cost standard on weekdays, Saturdays and Sundays. It is recommended that the last three round trips be removed from service on all of these days. This change would make the last trip leave Harvard at 9:25 PM on weekdays, 9:40 PM on Saturdays and 9:10 PM on Sundays instead of at 12:30 AM, 12:40 AM and 12:10 AM respectively. It is further recommended that the first Sunday round trip be removed from service,

making the first inbound trip start at 7:40 AM, rather than 6:40 AM. These changes are expected to cause the loss of 14, 22 and 17 passengers on weekdays, Saturdays and Sundays respectively.

A suggestion to combine routes 78, 79 and 84 is not recommended and is discussed in Section III.

Route 79: Arlington Heights – Alewife

This route connects Arlington Heights and Arlington Center to Alewife Station.

In the 2004 Service Plan changes were made to adjust the coordination of the 79 with the 77. More time is needed to assess the impact of these actions, and no change is recommended.

Proposals to add weekend service to route 79, to extend it to Lexington, and to combine it with routes 78 and 84 are not recommended and can be found in section III.

Route 80: Arlington Center – Lechmere via Powder House Square

This is a local route connecting Arlington Center, Medford Hillside, Powder House Square, Magoun Square, Gilman Square and Lechmere Station.

More recent data is needed to address schedule adherence problems.

Route 83: North Cambridge – Central Square via Porter

This is a local route connecting Russell Field, Rindge Ave., North Cambridge, Porter Square, Inman Square, and Central Square.

Recent data suggest that minor running time adjustments are needed on weekdays, and schedule adjustments

have been made on Sundays to relieve schedule adherence problems there. Route 83 has been experiencing disruption due to a construction project at Russell Field. This construction is drawing to a close, and the route's performance can be re-evaluated at that time.

Route 84: Arlmont – Alewife

This local route connects Arlmont Village, Park Circle and Alewife Station.

More recent data is needed to address schedule adherence problems.

Route 85: Spring Hill – Kendall/MIT

★ NEW MINOR Change Recommended

In response to concerns raised during the comment period about the frequency of Route 85 service, frequency of service during the morning peak will be improved from a bus every 35 minutes to a bus every 25 minutes, and the 5:40 PM outbound trip and all subsequent trips will be shifted ten minutes earlier. A change of Route 64 frequency in the morning peak will be necessary to facilitate this change.

Route 85 is a local route connecting Spring Hill, Summer Street, Union Square, and Kendall/MIT. Its service was extended later into the evening in the 2004 Service Plan.

Route 85 fails the frequency standard because some of its peak-period trips run every 40 minutes instead of every 30. This has not been a source of complaints and the present service levels are more than sufficient to carry the current level of ridership, so no change is recommended.

Route 86: Sullivan – Reservoir (Cleveland Circle) via Harvard

This connects Sullivan Square to Union Square, Harvard Square, Allston, Brighton, and Cleveland Circle

In the 2004 Service Plan operational changes were introduced to improve on-time performance and the span of service was extended on Sundays. More time is needed to assess the impact of these changes.

A request to add more service to Route 86 is not recommended and is discussed Section III.

Route 87: Arlington Center – Lechmere via Davis, Union Square

This route connects Arlington Center, Clarendon Hill, Davis Square, Union Square and Lechmere Station along Broadway, Elm Street, and Somerville Ave.

Newer data is needed to determine how to best address schedule adherence problems.

A suggestion to extend route 87 to Arlington Heights is not recommended and is discussed in Section III.

Route 88: Clarendon Hill – Lechmere via Davis

This route connects Clarendon Hill, Davis Square, Somerville High School, and Lechmere Station along Broadway, Holland, and Highland.

Newer data is needed to determine how to best address schedule adherence problems.

A suggestion to extend route 88 to Broadway and Sunnyside Avenue is not recommended and is discussed in Section III.

Route 89 Clarendon Hill or Davis Square – Sullivan Station

Route 89 operates from Clarendon Hill or Davis Square (Red Line) in Somerville to Sullivan Square (Orange Line) in Charlestown, serving Powder House Square, Magoun Square, and Winter Hill. The Davis Square branch was proposed in the 2004 Service Plan and was implemented in the Winter 2005 rating.

Route 89 passes all of the service standards except schedule adherence weekdays, Saturday, and Sunday. Corrective actions were taken in the 2004 Service Plan to improve schedule adherence on Sunday; however, new Ridecheck data has not been collected since then to determine whether the changes were effective. Because this route now operates using some GPS-equipped buses, as subsequent data become available, analysis of the run times will be conducted and additional changes introduced if warranted.

Several requests for enhanced service on Route 89 were not recommended. See Section III for more details.

Route 90: Davis Square Station – Wellington Station

Route 90 operates weekdays and Saturday from Davis Square (Red Line) in Somerville to Wellington Station in Medford (Orange Line), serving Somerville Hospital, Union Square, Sullivan Square (Orange Line), and Assembly Square Mall.

The most recent Ridecheck data show that Route 90 fails the frequency of service standard on weekdays and the schedule adherence standard on weekdays and Saturday. No changes are recommended at this time, as the

frequency of service was adjusted on this route in the Summer 2004 rating to improve on time performance, and the results of these improvements are still being evaluated.

Sunday service on Route 90 has been requested, but is not recommended at this time. See Section III for more details.

Route 91: Sullivan Sq. Station – Central Sq. Cambridge

★ **NO Change Recommended,
Preliminary Proposal Withdrawn**

Although a moderate change to eliminate the last round trip on Route 91 was proposed, it will not be implemented, as it could degrade existing service.

Route 91 operates from Sullivan Square (Orange Line) in Charlestown to Central Square (Red Line) in Cambridge, serving Union Square and Inman Square.

Route 91 passes all of the service standards, with the exception of schedule adherence weekdays, Saturday and Sunday. Corrective actions were taken in the Fall 2003 rating to improve schedule adherence on weekdays; however, new Ridecheck data has not been collected since then to determine whether the changes were effective. Because this route now operates using some GPS-equipped buses, as subsequent data become available, analysis of the run times will be conducted and additional changes introduced if warranted.

Due to very low ridership at the end of service weekdays, it is recommended that the last round trip on Route 91 be eliminated, so that the resources saved can be utilized more efficiently elsewhere in the bus system. It is

estimated that this change would affect only 5 riders.

Route 92: Assembly Sq. Mall – Downtown via Main St.

★ **NO Change Recommended,
Preliminary Proposal Withdrawn**

Although a moderate change to eliminate the last round trip on Route 92 was proposed, it will not be implemented as it could degrade existing service.

Route 92 provides service weekdays and Saturday from Assembly Square Mall or Sullivan Square (Red Line) via Main Street and City Square in Charlestown, to Haymarket Station (Orange and Green Lines) or Franklin & Arch Streets (adjacent to Downtown Crossing on the Orange Line) in Boston.

Route 92 passes all of the service standards, with the exception of schedule adherence weekdays and Saturday. Some minor weekday schedule adjustments were made for the Fall 2003 to alleviate schedule adherence problems. In addition, recent changes to the route configuration, as well as the approaching end of Big Dig construction should help to improve schedule adherence.

Due to very low ridership at the end of service weekdays, it is recommended that the last round trip on Route 92 be eliminated, so that the resources saved can be utilized more efficiently elsewhere in the bus system. It is estimated that this change would affect only 3 passengers, who could utilize Route 93 service instead.

Several requests for enhanced service on Route 92 were not recommended. See section III for more details.

Route 93: Sullivan Sq. Station – Downtown via Bunker Hill St.

Route 93 provides service from Sullivan Square (Red Line) via Bunker Hill Street and City Square in Charlestown, to Haymarket Station (Orange and Green Lines) or Franklin & Arch Streets (adjacent to Downtown Crossing on the Orange Line) in Boston. Route 93 provides some trips throughout the day to the Charlestown Navy Yard (and the USS Constitution).

Route 93 technically failed the load standard on Sunday; however, because this was due to one trip with three standees, no remediation is recommended. Route 93 also failed the schedule adherence standard weekdays, Saturday, and Sunday. Recent changes to the route configuration, as well as the approaching end of Big Dig construction should help to improve schedule adherence.

A proposal was approved through the 2004 Service Plan to split Route 93 service so that some trips would operate on Medford Street in Charlestown. This service has not yet been implemented, as the MBTA is still in discussions with the City of Boston regarding the placement of bus stops.

A request for extended service on Route 93 was not recommended. See section III for more details.

Route 94: Medford Square – Davis Square Station**★ NO Change Recommended,
Preliminary Proposal Withdrawn**

Although a major change to eliminate last two round trips on Route 94 was proposed, it will not be implemented, as it could degrade existing service.

Route 94 provides service from Medford Square (Medford City Hall) to Davis Square (Red Line) in Somerville, via Winthrop Circle, Tufts University, and Powder House Square.

This route passes all of the service standards, with the exception of schedule adherence Saturday and Sunday. Corrective actions were taken in the 2004 Service Plan to improve schedule adherence weekdays, and the results of these improvements are still being evaluated.

Due to very low ridership on weekday late night service, it is recommended that the last two round trips on Route 94 be eliminated, so that the resources saved can be utilized more efficiently elsewhere in the bus system. It is estimated that this change would affect only 8 passengers, most of whom could utilize Route 96 service instead.

Route 95: West Medford – Sullivan Square Station

Route 95 operates from West Medford (at Playstead Road and Winthrop Street) to Sullivan Square (Red Line) in Charlestown, serving West Medford Station (Lowell Commuter Rail), and Medford Square.

Route 95 passes all of the service standards, with the exception of schedule adherence weekdays, Saturday, and Sunday. Because this route now operates using some GPS-equipped buses, as subsequent data become available, analysis of the run times will be conducted and additional changes introduced if warranted.

Route 96: Medford Square – Harvard Station via George St.

Route 96 operates from Medford Square to Harvard Square (Red Line), serving Tufts University, Powder House Square, Davis Square (Red Line), and Porter Square (Red Line and Fitchburg Commuter Rail).

Route 96 passes all of the service standards, with the exception of schedule adherence weekdays, Saturday, and Sunday. Corrective actions were taken in the 2004 Service Plan to improve weekday schedule adherence, and the results of these improvements are still being evaluated.

Route 97: Malden Center Station – Wellington Station

Route 97 operates from Malden Center Station (Orange Line and Haverhill Commuter Rail) to Wellington Station (Orange Line) in Medford, via Everett Square, and the Gateway Center.

Route 97 passes all of the service standards, with the exception of schedule adherence weekdays, Saturday and Sunday. Some running time was added weekdays to trips during the AM and PM peak periods in the Spring 2005 rating to improve on-time performance, and the results of this improvement is still being evaluated.

Route 99: Boston Regional Medical Center – Wellington Station

- ✓ ***MODERATE Change Recommended, ALTERED from Preliminary Plan***

In the Preliminary Plan, it was proposed that the first two round trips and the last three inbound and last four outbound trips Saturday, and the first round trip and the last two inbound and last three

outbound trips Sunday be eliminated. It was also proposed that all trips end at Molineau Circle instead of the former Boston Regional Medical Center. These cuts were recommended, as Route 99 fails the net cost/passenger standard on Saturday. However, eliminating the PM service would leave Main Street without any service between Center Street, Malden and Sweetser Circle, Everett from 9:00 PM to 1:00 AM. It is, therefore, recommended now that only the proposed Saturday and Sunday morning trips be cut. In addition, because ending trips at Molineau Circle would not contribute to passing the net cost/passenger standard, it is recommended that all weekend trips continue to BRMC to be consistent with the weekday schedule. Although these changes do not make the route pass the net cost/passenger standard, they keep important coverage in the system.

Route 99 operates from the site of the former Boston Regional Medical Center in Stoneham to Wellington Station (Orange Line) in Medford, via Molineau Circle, Malden Hospital, Malden Center Station (Orange Line and Haverhill Commuter Rail), and Sweetser Circle.

Route 99 fails the schedule adherence standard weekdays, Saturday, and Sunday. Because this route now operates using some GPS-equipped buses, as subsequent data become available, analysis of the run times will be conducted and additional changes introduced if warranted. Route 99 also fails the net cost/passenger standard Saturday. New Ridecheck data for weekdays and Sunday show a significant drop in ridership since the closing of the Boston Regional Medical Center (BRMC). Although new data is not available for Saturday, it is assumed that

the trend toward lower ridership is the same.

To alleviate the net cost/passenger failures, it is recommended that trips with very low ridership be eliminated at the beginning and end of the day on Saturday and Sunday, as this can be done without causing the route to fail the span of service standard. On Saturday the first two round-trips would be eliminated, as well as the last three inbound and last four outbound trips. On Sunday, the first round-trip and the last three outbound and two inbound trips would be eliminated. In addition, it is recommended that all Saturday and Sunday trips end at Molineau Circle instead of extending to the former BRMC site. These changes could negatively affect as many as 56 riders Saturdays and 20 Sundays, but would save five hours of operation and close to 78 miles Saturdays and three hours of operation and close to 50 miles Sundays. With these changes Route 99 would pass the net cost/passenger standard for Saturday and Sunday. The MBTA is aware that new mixed-use development is planned for the BRMC site, and will re-evaluate weekend service needs, as development proceeds and if resources are available.

Route 100: Elm Street – Wellington Sta. via Fellsway

★ NO Change Recommended, Preliminary Proposal Withdrawn

Although a major change to eliminate the three round trips on Route 100 was proposed, it will not be implemented as it could degrade existing service.

Route 100 operates from Elm Street in Medford via Roosevelt Circle to Wellington Station (Orange Line).

Route 100 passes all of the service standards, with the exception of schedule adherence weekdays, Saturday, and Sunday. Because this route now operates using some GPS-equipped buses, as subsequent data become available, analysis of the run times will be conducted and additional changes introduced if warranted.

Due to very low ridership on weekday late night service, it is recommended that the last three round trips on Route 100 be eliminated, so that the resources saved can be utilized more efficiently elsewhere in the bus system. It is estimated that this change could affect approximately 11 riders.

Route 101: Malden Center Station – Sullivan Square Station

Route 101 operates from Malden Center Station (Orange Line and Haverhill Commuter Rail) to Sullivan Square Station (Orange Line) in Charlestown, via Medford Square, and Winter Hill.

During the Late Evening time period on Saturday, Route 101 technically fails the frequency of service standard, as buses operate every 65 minutes rather than every 60 minutes. However, tightening the headway would require adding a bus to the route, and ridership levels do not warrant this additional resource expenditure. Route 101 fails the frequency of service standard on Sunday as well, with a gap of more than one hour between two AM trips. However, no change is recommended because this occurs before the required span of service begins and tightening the headway would require adding a bus to the route, which is not warranted given existing ridership levels. Route 101 also fails the schedule adherence standard weekdays, Saturday and Sunday.

Running time was added to some Route 101 weekday trips to improve schedule adherence, and the results of this improvement is still being evaluated.

A request for more frequent service on Route 101 is not recommended at this time. For more details, please see Section III.

Route 104: Malden Center Station – Sullivan Station

Route 104 operates from Malden Center Station (Orange Line and Haverhill Commuter Rail) to Sullivan Square (Orange Line) in Charlestown, via Glendale Square, and Everett Square.

Although Route 104 technically fails the Load standard on Saturday, no action is recommended as the failure occurred due to only one observed outbound trip with three standees. Route 104 also fails the schedule adherence standard on weekdays, Saturday, and Sunday. A number of minor running time and headway adjustments were made to this route through the 2004 Service Plan to correct the schedule adherence problems, and the results of these improvements are still being evaluated.

Route 105: Malden Center Station – Sullivan Sq. Station

Route 105 operates from Malden Center Station (Orange Line and Haverhill Commuter Rail) to Sullivan Square (Orange Line) in Charlestown, via east Malden.

Route 105 fails the frequency of service standard weekdays (with 35-minute headways in the AM and PM peak periods and 70-minute headways midday) and in the PM on Saturday (with 65-minute headways). Because the ridership on this route is not heavy

and reducing the headways would require additional resources, no change is recommended at this time. Route 105 also fails the schedule adherence standard weekdays, Saturday and Sunday. Because this route now operates using some GPS-equipped buses, as subsequent data become available, analysis of the run times will be conducted and additional changes introduced if warranted.

Route 106: Lebanon St. Malden – Wellington Station

Route 106 provides all day service weekdays, Saturday, and Sunday from the Lebanon Loop to Wellington Station (Orange Line) in Medford, via Malden Center Station (Orange Line and Haverhill Commuter Rail). Route 106 operates midday on weekdays beyond the Lebanon Loop into Melrose providing service to Park and Linwood Streets, Melrose/Wakefield Hospital, and Franklin Square. Since elimination of Route 130, Route 106 also provides limited weekday AM peak period trips via Park and Linwood to Franklin Square.

Route 106 technically fails the frequency of service standard on Sunday. However, because this is due to one 63-minute headway in the morning and one 67-minute headway in the afternoon, no changes are recommended at this time. Route 106 also fails the schedule adherence standard weekdays, Saturday and Sunday. Changes that were made to Route 106 through the 2004 Service Plan were expected to improve schedule adherence on weekdays, and the results of these improvements are still being evaluated.

Route 108: Linden Square – Wellington Station**✓ *MODERATE Change Recommended, As Found in Preliminary Plan***

Route 108 provides service from Linden Square in Malden via Malden Center Station (Orange Line and Haverhill Commuter Rail) to Wellington Station (Orange Line) in Medford.

Route 108 passes all of the service standards, with the exception of schedule adherence weekdays, Saturday, and Sunday. Because this route now operates using some GPS-equipped buses, as subsequent data become available, analysis of the run times will be conducted and additional changes introduced if warranted.

Requests were received from the public to provide Sunday service on Route 108 to Granada Highland. It is, therefore recommended that on Sunday Route 108 operate on Salem to Broadway and then proceed on Broadway like Route 411, turning right on Trueman and left on Central. Unlike the 411, however, the 108 would not enter the Granada Highland complex, but would stop at the corner of Central and Kennedy, before continuing on Kennedy to Salem. The rest of the outbound route would be the same as the existing Route 108 from Salem to Lynn St. and Linden Sq. The inbound trip would begin at Linden Sq. and would be the same as the current 108 inbound routing. This would require additional running time, and would thus stretch the Sunday headways on Route 108 from 60 minutes to 65 minutes. This proposal would reduce the overall miles of operation and new ridership would be attracted by the service to Granada Highlands.

However, it is estimated that a net of

approximately 13 passengers would be lost due to the longer headway.

Requests for more frequent weekday and extended weekday and weekend service are not being recommended at this time. For more information, please see Section III.

Route 109: Linden Square – Sullivan Station

Route 109 operates from Linden Square in Malden (Orange Line and Haverhill Commuter Rail) to Sullivan Station (Orange Line) in Charlestown, via Glendale Square, Everett Square, and Sweetser Circle.

Route 109 passes all of the service standards, with the exception of schedule adherence weekdays, Saturday, and Sunday. Corrective actions were taken through the 2004 Service Plan to alleviate schedule adherence problems on weekdays, Saturday, and Sunday, and the results of these improvements are still being evaluated.

A request for extended weekday and weekend service is not being recommended at this time. For more information, please see Section III.

Route 110: Wonderland Sta. or Broadway & Park Ave. – Wellington Sta.**★ *NO Change Recommended, Preliminary Proposal Withdrawn***

Although a moderate change to eliminate last round trip on Route 110 was proposed, it will not be implemented as it could degrade existing service.

Route 110 operates from Wonderland Station (Blue Line) in Revere to Wellington Station (Orange Line) in Medford, via Bell Circle, Revere Center,

Woodlawn, Everett Square, and Sweetser Circle.

Route 110 passes all of the service standards, with the exception of schedule adherence weekdays, Saturday, and Sunday. Because this route now operates using some GPS-equipped buses, as subsequent data become available, analysis of the run times will be conducted and additional changes introduced if warranted.

Due to very low ridership on weekday late night service, it is recommended that the last round trip on Route 110 be eliminated, so that the resources saved can be utilized more efficiently elsewhere in the bus system. Most of the ridership on these trips could shift to the last Route 111 round trip, which will still operate to Broadway & Park. It is estimated that only one rider would be lost due to this change.

Route 111: Woodlawn or Broadway & Park Ave. – Haymarket Station

✓ ***MAJOR Change Recommended, As Found in Preliminary Plan***

Route 111 provides weekday early morning, AM peak, PM peak and evening service from Broadway & Park Avenue in Revere via Bellingham Square and North Station (Orange Line and Green Line) to Haymarket Station (Orange Line and Green Line) in Boston. Five short trips operate inbound only in the Early AM weekdays from Washington Avenue at Revere Beach Parkway to Haymarket. All day on Saturday and Sunday, and midday on weekdays, Route 111 operates from Woodlawn in Everett to Haymarket.

Route 111 fails the load standard on weekdays, Saturday, and Sunday. Route

111 also fails the schedule adherence standard on weekdays, Saturday, and Sunday. Since the last Service Plan, service changes have been made to alleviate load and schedule adherence problems on the Route 111. However, recent data collected on this route, as well as numerous customer complaints, indicate that growth in ridership has outpaced the increases in service. It is, therefore, recommended that the following additional changes be made to improve service on this route weekdays, Saturday, and Sunday.

It is recommended that weekday headways be improved to one bus every 5 minutes on Route 111 between Woodlawn and Haymarket (which is the most heavily used portion of the route) during the Early AM, AM Peak and PM Peak time periods. To accommodate this change, the Route 111 would no longer operate between Woodlawn and Broadway & Park during these time periods. The route had been extended to Broadway & Park in the Spring 2001 rating due to an abutter's concerns, and has attracted some ridership in the extended corridor. The proposed change would create some inconvenience for passengers who currently board between Broadway & Park and Woodlawn; however, they represent a very small portion of the total Route 111 riders, and they would still be served by Route 110. This change would substantially benefit the majority of current Route 111 riders, as it would reduce vehicle loads and should improve schedule adherence. It is estimated that there would be a net gain of 122 riders from the increased service, while the hours and miles of operation would remain essentially the same.

On Saturday, it is recommended that one trip be added at the beginning of the service day (at 5:00 AM), and that a vehicle be added from 5:00 to 9:00 AM, which would improve the headways from 15 minutes to 12 minutes during these hours. In addition, a vehicle would be added from noon until 4:00 PM, which would improve the headways from 12 minutes to 10 minutes during these hours. These changes would add eight hours and close to 88 miles of operation on Saturdays, would attract approximately 283 new passengers, and would ease the passenger load problems on the existing Saturday service.

Sunday service was improved on Route 111 during the Summer 2004 rating; however, passenger data that were collected shortly thereafter showed continuing load problems. It is, therefore, recommended that on Sunday a vehicle be added from 2:00 PM until 7:00 PM, which would improve the headways from 16 minutes to 12-13 minutes during these hours. This change would add five hours and 67 miles of operation on Sundays, would attract approximately 220 new passengers, and would ease the passenger load problems on the existing Sunday service.

Route 112: Wellington Station – Wood Island Station

★ NO Change Recommended, Preliminary Proposal Withdrawn

Due to the overwhelmingly negative reaction to the proposed change, which would have alternated service between Admiral's Hill and Quigley Hospital during peak periods, no change is being recommended at this time.

Route 112 operates from Wellington Station (Orange Line) in Malden to

Wood Island Station (Blue Line) in East Boston, via Everett Square, Quigley Hospital, Mystic Mall, Admiral's Hill, and Bellingham Square.

Route 112 fails the span of service standard on Sunday, as the last outbound trip departs at 6:15 PM—fifteen minutes before the time required by the standard. However, the very low ridership on the last trip does not warrant the addition of resources that would be necessary to provide a later trip. Route 112 technically fails the frequency of service standard on Sunday. Because this is due to one 90-minute headway before the required start of service, no action is recommended to correct this failure. Route 112 also fails the frequency of service standard weekdays, with 35-minute headways during the AM and PM peak periods. Given the passenger utilization levels on this route, and current resource constraints, it is not recommended that action be taken at this time to improve the headways. Route 112 fails the schedule adherence standard weekdays, Saturday, and Sunday.

A request was made to make Route 112 service more direct. It is therefore proposed that weekday service be changed so that outbound trips (headed toward Wellington) between 6:30 AM and 9:00 AM and inbound trips (headed toward Wood Island) between 3:30PM and 6:00 PM would alternately serve Admiral's Hill or Quigley Hospital. By making every other trip serve only Admiral's Hill or Quigley Hospital, the running times on the affected trips would be shortened by approximately seven minutes and headways during the affected time periods would be improved from 35 minutes to 32 minutes. Inbound (headed toward Wood Island) between

6:30 AM and 9:00 AM and outbound (headed toward Wellington) between 3:30 AM and 6:00 PM, all trips would continue to serve both Admiral's Hill and the hospital.

Another request was made to offer service to Woods Island later in the day. To do so, it is recommended that, after the end of the PM Peak period, headways be stretched to 60 minutes, so that the last outbound trip from Wood Island would depart at approximately 9:00 PM. It is estimated that the hours of operation would remain the same, the miles would be slightly reduced, and approximately 17 additional riders would be attracted to the service due to the shortened headways and improved reliability.

After completion of improvements to Maverick Station, the MBTA would like to consider ending Route 112 at Maverick instead of Wood Island. We are, therefore, currently seeking public input on this idea for future consideration.

Route 114/116/117/197: Wonderland & Bellingham Square - Maverick Sta.

✓ ***MINOR Change Recommended,
As Found in Preliminary Plan***

These routes provide service in Revere, Chelsea, and East Boston with a shared common segment on Broadway and Meridian Street.

Changes are to be implemented in the Winter of 2006 on weekday, Saturday, and Sunday schedules to address crowding and schedule adherence failures by enhancing reliability and reducing early/late departures.

Route 197 (Wonderland-Haymarket Sunrise Service) has been redesignated

as a variation of Route 117 (to make the service easier to understand), and one early AM Sunday trip has been added so as to make the Sunrise Service, and span, nearly identical daily. Also, an extension to the last outbound Route 116 of the evening (i.e., a short backtracking on Beach Street and Central Ave.) will be implemented with the winter schedule to provide later service for anyone missing the final outbound Route 117.

Route 119: Northgate Shopping Center - Beachmont Sta.

✓ ***MODERATE Change Recommended,
As Found in Preliminary Plan***

Route 119 serves residential neighborhoods in Revere, the Linden Sq/Northgate retail area, and Beachmont Station.

New schedules that redistribute run and layover times should address schedule adherence issues, though a 35-minute peak period headway that will be implemented in the Winter of 2006 will result in a frequency failure.

Transferring weekday resources from a lightly utilized weekday 1:30 PM inbound trip to a new 6:00 PM trip will improve frequency in the PM peak period.

Route 120: Orient Heights - Maverick

Route 120 is a local route that serves Bennington Street, Jeffries Point, and the Waldemar Housing area in East Boston.

It currently fails the schedule standard although proposed minor schedule revisions should mitigate these issues.

Route 121: Wood Island - Maverick Sta.

Route 121 provides commuter service on Lexington Street in East Boston. In the PM peak, this route operates between Eagle Sq. and Maverick only.

No changes are currently recommended although delays that can affect successively hooked trips seem to trigger schedule adherence failures. This route sometimes operates using GPS-equipped buses, which are beginning to provide detailed information on running time. Additional analysis using data generated from the new technology will be performed as sufficient data become available.

Route 131: Melrose Highlands – Malden Ctr. Station**★ NEW MINOR Change Recommended**

Recent ridecheck data show very low ridership on AM trips in the shoulder of the peak. It is, therefore, recommended that the outbound trip at 9:05 AM and the inbound trip at 9:25 AM be eliminated so that the resources saved can be utilized more efficiently elsewhere in the bus system. This change is predicted to affect three customers, and the route will still pass the Frequency of Service standard.

Route 131 provides weekday service from Melrose Highlands via Franklin Square and east side Melrose to Oak Grove Station (Orange Line) or Malden Center Station (Orange Line and Haverhill Commuter Rail).

Route 131 passes all of the service standards, with the exception of schedule adherence weekdays. Corrective actions were taken through the 2004 Service Plan to alleviate the schedule adherence

problems, and the results of these improvements are still being evaluated.

Route 132: Redstone Shopping Ctr. – Malden Ctr. Station

Route 132 operates weekdays and Saturday from the Redstone Shopping Center in Stoneham to Malden Center Station (Orange Line and Haverhill Commuter Rail), via Wyoming Square and Oak Grove Station (Orange Line).

Route 132 currently fails the frequency of service standard on weekdays, as it provides service at a 45-minute headway during most of the PM peak, with a 55-minute gap between 5:30 and 6:30 PM. Given current passenger utilization levels on this route, and a tight operating budget, it is not recommended at this time that additional service be added to improve headways to meet the standard. Route 132 also technically fails the frequency of service standard on Saturday with one 90-minute headway at the end of service. However, as a result of the 2004 Service Plan, Saturday headways were improved from 90 minutes all day to 60 minutes most of the day. Route 132 fails the schedule adherence standard weekdays and Saturday. Corrective actions were taken through the 2004 Service Plan to alleviate weekday schedule adherence problems, and the results of these improvements are still being evaluated.

According to the most recent Ridecheck data, Route 132 fails the net cost/passenger standard on Saturday. However, these data were collected before the Saturday headways were improved. Projections of increased ridership due to increased frequency of service improve the net cost/passenger. It is recommended that Saturday service

be maintained, as no other routes serves the Redstone Shopping Center.

A request for additional frequent service is not being recommended at this time. For more information, please see Section III.

Route 134: North Woburn – Wellington Station

★ NO Change Recommended, Preliminary Proposal Withdrawn

Although a major change to eliminate the last three round trips on Route 134 was proposed, it will not be implemented as it could degrade existing service.

Route 134 operates weekdays and Saturday from North Woburn or Playstead Road & Winthrop Street to Wellington Station (Orange Line) in Medford via Winthrop Circle, Medford Square, and Meadow Glen Mall. On Sunday, service operates from Woburn Square to Wellington.

Route 134 fails the frequency of service standard on Sunday, as the last trip of the day has a 75-minute headway. However, this is an artifact of the extension of service from Medford Square to Woburn Square, which was proposed in the 2004 Service Plan and implemented in Winter 2005. Route 134 fails the schedule adherence standard weekdays, Saturday, and Sunday. In addition, Route 134 fails the net cost/passenger standard on Sunday. Because the ridership data for Sunday have not been collected since service was extended to Woburn Square, it is recommended that no action be taken until new Sunday data are available.

Due to very low ridership at the end of service weekdays, it is recommended that the last three round trips on Route 134 be eliminated, so that the resources

saved can be utilized more efficiently elsewhere in the bus system. It is estimated that this change could affect approximately 15 riders.

A request for further extension of Sunday service is not being recommended at this time. For more information, please see Section III.

Route 136/137: Reading Depot – Malden Station

✓ MINOR Change Recommended, As Found in Preliminary Plan

Routes 136 & 137 operate together from Reading Depot (Haverhill Commuter Rail) to Malden Center Station (Orange Line and Haverhill Commuter Rail), sharing the same alignment from Wakefield Square to Malden Station via Greenwood Station (Haverhill Commuter Rail), Franklin Square, and Oak Grove Station (Orange Line). Between Reading Station and Wakefield, Route 137 operates south of Lake Quannapowitt, via Wakefield Station (Haverhill Commuter Rail), while Route 136 operates north of the lake. Because Routes 136 and 137 share much of the same alignment, they were analyzed together as one route for the purposes of this Service Plan.

Route 136/137 fails the frequency of service Standard on weekdays, for the last trip of the day only (inbound and outbound). However, an additional vehicle would be needed on the route to improve the headway for these trips. Given ridership levels on these trips, a change is not recommended at this time. Route 137, by itself, fails the load standard, based on one trip; however, when analyzed with route 136, which operates on the same alignment at the maximum load point, the combined

route passes the load standard. Route 136/137 fails the schedule adherence standard on weekdays and Saturdays. Because this route now operates using some GPS-equipped buses, as subsequent data become available, analysis of the run times will be conducted and additional changes introduced if warranted.

Route 136/137 also fails the net cost/passenger standard on Saturday and resolve this it is recommended that headways on the common alignment be stretched from 30 minutes to 45 minutes. It is estimated that this change would reduce ridership on the Route 136/137 by approximately 140 passengers, due to the longer headways; however, close to 12 hours and 176 miles of operation would be saved.

A request for additional service is not being recommended at this time. For more information, please see Section III.

Route 170: Dudley Station – Oak Park, Bedford

★ **NO Change Recommended, Preliminary Proposal Withdrawn**

Due to a larger than anticipated negative response to the proposal to discontinue Route 170 service within Burlington and Bedford, this proposal is being withdrawn. Alternate measures to improve the route's cost-effectiveness will be explored.

Route 170 provides two morning trips from Dudley to Oak Park, Bedford via Back Bay Station, Waltham Center, and Waltham businesses along Route 128. There is a single return trip in the afternoon. There were 17 outbound passengers and 10 inbound passengers when last counted in Winter 2005.

The Route 170 does not meet the MBTA's standards for span, frequency, schedule adherence, or cost. It is recommended that the Route 170 be replaced by 2-3 reverse-commuter trips on the new Route 505A. The new route 505A trips would terminate downtown at Federal & Franklin Sts, and serve Copley Square, Waltham Center, and the office parks along Bear Hill Rd., Second Ave., and Wyman St. in Waltham. Service would no longer operate to Dudley Station or to office parks in Billerica or Burlington. The seven inbound passengers and zero outbound passengers who board or alight between Dudley Station and Massachusetts Ave. Station would either take the Silver Line to downtown and board on Otis St., or take the Orange Line and board at St. James Ave. Any Back Bay customers would board at St. James Ave. in Copley Square or alight on Stuart St. The two customers who travel to the office parks in Bedford and Burlington would be shifted onto the Route 351 bus from Alewife. By modifying the route as proposed, it would be possible to add a trip in each direction. Trips would operate as follows:

Outbound:			Inbound:		
Dep	Arr	Arr	Dep	Arr	Arr
Fed & Frnkln	Walth Ctr	Wymn & Traplo	Wymn & Traplo	Walth Ctr	Fedl & Frnkln
6:10 A	6:38 A	6:53 A	3:45 P	4:02 P	4:38 P
7:00 A	7:35 A	7:50 A	4:30 P	4:47 P	5:23 P
7:30 A	8:10 A	8:20 A			

These changes are expected to attract 11 new boardings, although 4 boardings would be shifted onto other routes.

Route 171: Dudley Station – Logan Airport

Route 171 provides early morning service from Dudley Station to Logan Airport via Andrew Station. The service is designed to carry airport employees to work before the regular subway and bus network begins running.

Technically, this route fails the span standard on weekdays, Saturdays, and Sundays and the cost standard on Saturday mornings. However, since this route is a supplement to a number of other subway and bus routes that operate during the regular service day, no change is recommended. The route also fails the reliability standard. As more detailed run time data become available, adjustments will be made to the schedule through the quarterly process of service changes.

216: Houghs Neck – Quincy Center

✓ ***MINOR Change Recommended, As Found in Preliminary Plan***

Service is provided to Hough's Neck daily, Sundays via Germantown.

It is proposed to redirect weekday and Saturday midday service via McGrath Highway in lieu of Coddington Street near Quincy Center (identical to Route 214 at present), so as to better serve some retail establishments there, and simplify the service by placing all bus service on one corridor based on time of day.

217: Quincy Center – Ashmont via Wollaston Beach

✓ ***MINOR Change Recommended, As Found in Preliminary Plan***

Route 217 operates weekday/workdays only. To eliminate a problematic turn, it is proposed to redirect Ashmont-bound service via Fenno Street in lieu of Elm Ave. in the vicinity of Wollaston Beach.

225: Weymouth Landing – Quincy Center

✓ ***MINOR Change Recommended, As Found in Preliminary Plan***

Route 225 operates daily. Monday-Saturday, alternating trips serve Shaw Street or Desmoines Road; on Sundays, all service operates via Desmoines Road (i.e., via the 1000 Southern Artery senior citizen residence).

As the Fore River Shipyard is no longer a major employment center, and a new retail/residential development has been established at the intersection of Southern Artery and Quincy Ave., it is proposed to redirect all Desmoines Road trips via Quincy Ave. to Southern Artery, in lieu of via Howard Street. This will re-establish a former variation of Route 225 service that was discontinued before the retail development was constructed.

245: Quincy Center – Mattapan

✓ ***MINOR Change Recommended, As Found in Preliminary Plan***

Route 245 operates Quincy Center - Mattapan Monday-Saturday. On Sundays, a shuttle service from Quincy Center Station via Whitwell and Adams Streets operates.

To make the span identical for every day of Mattapan service, it is proposed to

add a Saturday departure from Quincy Center at about 7:00 PM and commensurate return from Mattapan about 7:40PM.

Route 325: Elm St. Medford – Haymarket via I-93

★ NEW MINOR Change Recommended

Although no change was initially proposed for this route, new ridecheck data show very low ridership on outbound trips at 3:59 PM and 4:14 PM. It is, therefore, recommended that the 3:59 PM trip be eliminated so that the resources saved can be utilized more efficiently elsewhere in the bus system.

Route 325 operates weekdays only from Elm St. at Fellsway in Medford via Roosevelt Circle and I-93 to Haymarket Station (Green and Orange Lines) in Boston. Trips operating in the reverse-peak direction (outbound in the morning and inbound in the afternoon) run express between Roosevelt Circle and Haymarket, while peak direction trips (inbound in the morning and outbound in the afternoon) provide service along Fellsway West and Salem Streets between I-93 and Roosevelt Circle.

Route 325 fails the schedule adherence standard on weekdays. Recent changes to the route configuration, as well as the approaching end of Big Dig construction should also help to improve schedule adherence. Route 325 technically fails the span of service standard. To correct this failure, it is proposed that the last outbound departure be shifted from 6:29 to 6:30 PM through the regular quarterly schedule changes. In addition, Route 325 fails the net cost/passenger standard; however, no changes in service are being recommended to improve the net cost/passenger at this time. This is to

allow the opportunity for ridership to rebuild since restoration of the bus stop on Congress Street and after completion of Big Dig construction, which has negatively affected on-time performance.

Route 326: West Medford – Haymarket via I-93

★ NEW MODERATE Change Recommended

Although no change was initially proposed for this route, new ridecheck data show very low ridership in the midday and early PM peak. It is, therefore, recommended that the 3:52 PM outbound trip be eliminated. The resources would be used to add an outbound trip at 7:05 PM. This would provide later service from Haymarket to Medford Square to satisfy the request received during the public process for a stop at Medford Square on Route 354 after the PM peak.

Route 326 provides weekday express service via I-93 between West Medford and Haymarket Station (Green and Orange Lines) in Boston, via Medford Square. From West Medford, peak direction trips (inbound in the morning and outbound in the afternoon) operate via West Medford (Lowell Commuter Rail), while reverse-peak direction trips (outbound in the morning and inbound in the afternoon) serve Winthrop Street in Medford.

Route 326 fails the schedule adherence standard on weekdays. Recent changes to the route configuration, as well as the approaching end of Big Dig construction should also help to improve schedule adherence.

A request for additional service is not being recommended at this time. For more information, please see Section III.

Route 350: Burlington – Alewife

This route connects Burlington, the Burlington Mall, and Woburn to Arlington Center and Alewife.

More data are needed to address schedule adherence issues on weekdays and Saturdays. On Sundays, more running time is needed between 11:00AM and 6:00PM. This can be provided by stretching service from every 50 minutes to every 55 or 60 minutes. (60 fits better with the existing schedule.) In theory the change in frequency would mean a loss of 10-20 riders, but in reality it would be less than that because reliability would improve.

Additional outbound trips on Sunday between 8:00 AM and 11:00 AM should be modified to operate via Burlington Mall to serve employment areas. To accommodate this longer routing, service frequency will change from every 60 minutes to every 80 minutes in this time period. Service frequency after 11:00 AM would remain unchanged.

A suggestion to extend route 350 to Billerica is not recommended and can be found in Section III.

Route 351: Bedford – Alewife

✓ ***MODERATE Change Recommended, As Found in Preliminary Plan***

This express route connects Bedford and Burlington to Alewife Station.

Route 351 fails the schedule adherence and cost standards. More data are needed to address schedule adherence; the cost per passenger can be improved with the proposal that follows.

In the 2004 Service Plan two trips per direction were rerouted to serve Lexington Center in order to provide for local transfers and increased inter-

suburban service. This change has fared very poorly. It has attracted an average of less than one customer per day, and has become a major source of complaints from through-riders who experience a longer travel time. The information available indicates that the only impact this change could have had on ridership is negative. Route 351 fails the cost standard.

It is recommended that the two trips serving Lexington Center be changed back to their previous routing. This should reduce complaints on the route and improve the net cost/passenger.

A proposal to introduce bi-directional service to route 351 is recommended for future consideration and can be found in Section IV.

Route 352: Burlington – Boston

Route 352 operates on weekdays (peak direction only) from North Burlington via Cambridge Street to I-95 and runs express on I-95 and I-93 into Boston, terminating at State Street Station (Blue and Orange Lines). Outbound from State Street, Route 352 also serves Government Center Station (Blue and Green Lines), and the Haymarket Station area (Orange Line) in Boston.

Route 352 passes all of the service standards, with the exception of schedule adherence. Some schedule changes were introduced in the Summer of 2005, and the results of these improvements are still being evaluated.

Route 354: Woburn – Boston

★ ***NEW MINOR Change Recommended***

In the Preliminary Plan, it was proposed that two AM peak and two PM peak trips be reinstated on this route in response to

customer complaints. However, recent observations indicate that current ridership does not justify restoration of all trips, so it is now recommended that only the 5:15 PM peak outbound trip be added back into the schedule.

Route 354 operates weekdays from Van deGraff Drive in Burlington to State Street Station (Blue and Orange Lines) in Boston, via Woburn Square, providing reverse-peak direction (outbound in the morning and inbound in the afternoon) service to Cummings Park, and running express via I-93 to Boston. Outbound from State Street, Route 354 also serves Government Center Station (Blue and Green Lines), and the Haymarket Station area (Orange Line) in Boston. Some reverse-peak direction trips (outbound in the morning and inbound in the afternoon) also stop in Medford Square, and outbound evening trips extend to Chestnut Avenue in Burlington.

Route 354 passes all of the service standards, with the exception of schedule adherence.

Beginning in the Summer 2005, service on Route 354 was trimmed due to budget constraints. Although the route continues to pass the loading standard, in response to customer requests, it is now being recommended that two trips in the AM Peak and two trips in the PM Peak be restored.

A suggestion to have evening peak direction trips stop in Medford Sq. is not recommended and can be found in Section III.

Route 355: Mishawum Station – Boston

Route 355 provides limited weekday service via I-93 between Mishawum

Station in Woburn and State Street Station (Blue and Orange Lines), with stops at West Cummings Park and Medford Square. Outbound from State Street, Route 355 also serves Government Center Station (Blue and Green Lines), and the Haymarket Station area (Orange Line) in Boston. Route 355 operates only two outbound trips in the AM and two inbound trips in the PM, providing service only in the reverse peak direction (outbound in the morning and inbound in the afternoon). In the peak direction (inbound in the morning and outbound in the afternoon), three of the four Route 355 trips operate in service as Route 352 trips.

Due to the limited service provided by the Route 355, it fails the span, frequency and net cost/passenger standards. However, because three of the four Route 355 trips would be deadhead trips on Route 352 if the Route 355 were not operating, it is recommended that Route 355 not be changed. Route 355 also fails the schedule adherence standard. Because this route now operates using some GPS-equipped buses, as subsequent data become available, analysis of the run times will be conducted and additional changes introduced if warranted.

Route 411: Malden Ctr. Station – Revere/Jack Satter House

Route 411 provides service between Malden Center Station (Orange Line and Haverhill Commuter Rail) and the Jack Satter House in Revere, serving Granada Highlands, Linden Square, Northgate Shopping Center, Wonderland Station (Blue Line), and Revere Beech Station (Blue Line).

Route 411 fails the span of service standard on Saturday, the frequency of

service standard weekdays, and the schedule adherence standard weekdays and Saturday. Given existing passenger utilization rates, action to correct span and frequency of service is not recommended at this time. Because this route now operates using some GPS-equipped buses, as subsequent data become available, analysis of the run times will be conducted and additional changes introduced if warranted.

A request for additional weekday service on Route 411 is not being recommended at this time. For details, please see Section III.

Route 424W/424: Eastern & Essex – Wonderland or Haymarket

This weekday, peak-period commuter route provides service from Eastern Avenue in Lynn to Wonderland in the AM, and from Haymarket in the PM.

No changes are recommended, as actual departure times approximate those scheduled. Earlier-than-scheduled AM arrivals at the Wonderland Station are often experienced, due to varying traffic conditions. However, since 96% of all Route 424W customers board in Lynn, the early arrivals pose little inconvenience. Modifying the schedule to reduce travel time could inconvenience passengers on those trips that experience delays in Revere resulting in late arrivals.

Route 426/426W: Central Sq. Lynn – Haymarket or Wonderland

✓ ***Moderate Change Recommended, As Found in Preliminary Plan***

Route 426 is a zoned/express route that links Central Sq., Lynn with Boston via Cliftondale Square. Most weekday

service operates to Haymarket. Weekend service operates to Wonderland.

Proposed new scheduled times should address schedule adherence issues. Weekday crowding is largely related to very short-duration rides during school release times on Saturdays, a new schedule that reallocates resources from the existing services should improve schedule adherence.

Route 428: Oaklandvale – Haymarket

Route 428 is a commuter route linking Wakefield and Saugus with Haymarket Station.

A schedule time adjustment made in the fall of 2005 has been implemented to address schedule adherence issues. Early arrivals are not being addressed because of the express nature of the service. This adjustment will continue to be monitored to ensure that the local portion meets with the on-time measures.

Route 429: Central Sq. Lynn – Northgate Shopping Center

✓ ***Moderate Change Recommended, As Found in Preliminary Plan***

Route 429 is a local route that links Revere with Central Sq. Lynn via Saugus and the Square One Mall.

Proposed adjustments to the run times should address schedule adherence issues. In response to a request, it is proposed to provide one more evening trip on weeknights and Saturdays via the regular 429 on Garfield and Newcomb) Demand on the first Sunday AM trips is fairly strong at 55 boardings; thus two early morning Sunday trips are proposed and will depart Lynn at 7:00 AM and 8:30 AM. A proposed new Saturday morning half-trip departing Lynn at 7:00

AM will make the startup time identical for both weekend days.

Route 430: Saugus Center – Malden Center Station

Route 430 operates between Saugus Center and Malden Center Station (Orange Line and Haverhill Commuter Rail), providing service to Clifftondale Square, the Square One Mall, and Granada Highlands.

Route 430 fails the span of service standard on Saturday, the frequency of service standard weekdays, and the schedule adherence standard weekdays and Saturday. Given existing passenger utilization rates and current fiscal constraints, action to correct span and frequency of service is not recommended at this time. Because this route now operates using some GPS-equipped buses, as subsequent data become available, analysis of the run times will be conducted and additional changes introduced if warranted.

A request for extended service on Route 430 is not being recommended at this time. For details, please see Section III.

Route 431: Neptune Towers – Central Sq. Lynn

✓ **MAJOR Change Recommended, As Found in Preliminary Plan**

Route 431 is local service via Summer Street and was implemented at the request of the public in the 2002 Service Plan.

Typical boardings are very low, as follows: Weekday 92, Saturday 3, and Sunday 8. The only trips that see any reasonable amount of ridership are those carrying students. The Route 431 service area on Summer Street is parallel to (and only about two blocks south of)

Common Street, where other MBTA bus service is available. Given the low ridership and proximity to other MBTA bus service, it is proposed to discontinue Route 431 as an independent route yet retain the following weekday trips as extensions of Routes 435 and 436:

Dep.	Arr.	Dep.	Arr.
Central Sq. Lynn	Neptune Towers	Neptune Towers	Central Sq. Lynn
704A	709A	709A	715A
	s 235P*		246P

* runs when school is in session using 2 buses

Route 434: Peabody – Haymarket

Route 434 is a single round trip, weekday-only express service linking Peabody and Haymarket via Lynn. Although this fails the span, frequency and schedule adherence measures no changes are recommended, as recent ridecheck data show consistent departure times despite variable run times, thus the service is reliable for waiting customers. This route does pass the loading and net cost per passenger standard and does not warrant additional service

Route 435/436: Danvers – Central Sq. Lynn

✓ **MINOR Change Recommended, As Found in Preliminary Plan**

These routes link Danvers with Lynn via Peabody providing service to the major retail, industrial and medical facilities in the area. They also provide service to local area schools.

When former Route 433 (Pine Hill - Central Sq. Lynn) was discontinued in 2002, five weekday Route 435 one-way trips were redirected via Pine Hill so as to maintain a mobility option in that

community. As the average utilization of these trips is now only one person, it is proposed to discontinue the Pine Hill route segments and redirect these Route 435 trips via Boston, Maple, and Euclid Streets. Departure times and terminals will not change. It is anticipated that this change could grow ridership on Route 435 by adding more service on the main portion of the route. These changes should improve schedule adherence on the 435 by increasing recovery time and making the route more direct.

No changes are recommended on Route 436. However, this route sometimes operates using GPS-equipped buses, which are beginning to provide detailed information on running time. Additional analysis using data generated from the new technology will be performed as sufficient data become available and modifications in the schedule incorporated as needed.

Route 439: Nahant – Central Square Lynn

Route 439 links the island community of Nahant with Lynn during weekdays only. In addition to providing a link to Central Square, Lynn it also provides direct service to Vinnin Square, Swampscott. This route has one of the highest net costs per passenger in the system. Since cutting service any further would essentially mean eliminating it, the option of expanding the service was explored to see if additional service could trigger sufficient ridership to make the route pass the net cost per passenger standard.

Unfortunately, given the current base ridership, even with a projected increase due to more service, ridership would still

be very low and the performance cost measure would still not be met.

As Nahant is geographically isolated, and Route 439 provides the sole mass transit service on the island, no changes are currently recommended.

Route 441/442, 441W/442W, 448/449: Marblehead – Boston

★ MAJOR Change Recommended, ALTERED from Preliminary Plan

The proposal to provide earlier service from Marblehead will not be implemented, due to community opposition and insufficient resources. The proposal to discontinue Routes 448 and 449 also will not be implemented, due to rider opposition. Instead the 7:58 AM inbound trip will be discontinued. The 7:30 AM outbound 441 will terminate at Wonderland. The activated deadhead and alternating Paradise/Humphrey evening service proposals are unchanged.

These routes link Marblehead with Boston via Lynn, and operate as six principal variations. Route 441 operates via Paradise Road, and Route 442 operates via Humphrey Street. Some peak period (and all weekend/holiday) service operates to Wonderland, and several peak period trips serve Downtown Crossing as Routes 448 (Paradise) and 449 (Humphrey).

A proposal to operate a weekday short route service was implemented in the summer of 2005 as Routes 441W and 442W, that turn outbound at Phillips Beach and do not serve Marblehead. This, and proposed run time adjustments, should address schedule adherence issues.

A request for closed-door service through Swampscott and Lynn to Boston

is already partially addressed by Routes 448 and 449 that bypass the Central Sq. Lynn busway and Point of Pines. As the first weekday inbound Route 442 trip is well patronized, and in response to a request, earlier service is proposed by moving this departure from 5:40 AM to 5:20 AM. Thus this bus will connect with the 5:53 AM inbound Rockport train at Lynn (arrival North Sta. 6:16AM), and provide through service to Haymarket, arriving at 6:17 AM. It is also proposed that the 6:00 AM departure from Phillips Beach be extended to Marblehead to compensate, departing from Marblehead at approximately 5:50.

A request to allow contraflow (AM peak Wonderland to Lynn) riding will be accommodated by activating certain present deadhead trips from Wonderland as Route 442:

Depart Wonderland via 442	Arrive Central Square
7:09 AM	7:25 AM
7:49 AM	8:05 AM

Routes 448 & 449 operate largely as a weekday-only subset of Routes 441 & 442 and not as fully distinct routes. Only 43 inbound passengers and 32 outbound passengers use stops between Wonderland and Downtown Crossing. To provide more cost effective service and eliminate the duplicative nature of these lightly used portions, it is proposed that Routes 448 and 449 be discontinued and additional trips be added to Routes 441W and 442W to maintain existing frequencies between Wonderland and Marblehead.

Passengers desiring to travel between Marblehead and Swampscott, and World Trade Center or Downtown Crossing

could transfer between Routes 441/442 and Route 459 at Central Square, Lynn. The majority of these passengers are expected to transfer to the Blue Line, use Routes 441/442 to Haymarket, or transfer to Route 459 at Central Sq. 20 passengers are expected to be lost with this change.

A request to alternate the trips between Route 441 and 442 in the evening is also recommended to allow for evening travel along Paradise Road. As a result each route will fail the frequency standard of once an hour in the unique portion of the routes; however, they will continue to pass it in the portion from Haymarket to Lynn.

Route 450/450W: Salem – Haymarket or Wonderland

✓ ***Moderate Change Recommended, As Found in Preliminary Plan***

Route 450 links Salem with Boston via Western Ave. in Lynn. Weekday service operates to Haymarket, Weekend Service operates to Wonderland as Route 450W.

New run times and a proposed new schedule should address schedule adherence issues on weekdays. A new 6:55 PM inbound trip will address a two-hour headway gap, the last outbound bus will be ten minutes later, and the last inbound bus (typical boardings, seven) will be 25 minutes earlier.

On Saturdays, the existing interline with Route 426W has proven problematic. It is thus proposed to restructure Route 450W and Route 465 (Danvers Malls-Salem) into an integrated, interlined service provided on a purpose- and resource-driven schedule. This will guarantee connections at Salem by

introducing through service Salem-Wonderland.

New run times are proposed for midday Sundays.

Route 451: Beverly – Salem

★ **NO Change Recommended, Preliminary Proposal Withdrawn**

The proposal to discontinue all Saturday Route 451 service is withdrawn as other proposals to redirect these resources were also withdrawn. The schedule will be adjusted commensurate with the Route 450/465 purpose and resource-driven schedule adjustments (see above).

Route 451 links North Beverly with Salem on weekdays. On Saturdays a short route operates Ellis Sq., Beverly-Salem Depot.

Route 451 Short Route (Ellis Sq. - Salem) service on Saturdays was inaugurated in the summer of 2002 as part of a restructuring of North Shore area bus service. This route is interlined with Route 465 such that two buses maintain an hourly headway. Saturday Route 451 ridership has failed to develop, with the ten round trips averaging fewer than eight boardings each, and only one half-trip averaging more than ten boardings. Given the proximity of Newburyport/Rockport Line commuter rail service, discontinuance of Saturday Route 451 service is proposed.

Despite a high net cost per passenger since Route 451 provides the sole MBTA directly operated bus service in Beverly no weekday changes are currently recommended.

Route 455 & 459: Salem – Boston

★ **MAJOR Change Recommended, ALTERED from Preliminary Plan**

The proposal to reduce Route 459 to three round trips is withdrawn. The new proposal is to convert the 5:10 AM inbound 455 to a 455W; eliminate the 6:35 AM and 7:10 PM outbound 459; convert the 5:40 PM inbound 455 to a 459; discontinue the 9:30 PM 426/455 and the 8:40 PM inbound 450.

These routes link Salem with Boston (Wonderland, Haymarket, or Downtown Crossing) via Loring Avenue.

New running times should address schedule adherence issues. For Route 459 it is proposed to make the inbound Logan Airport stop “on request to debark only.

An alternative proposal is that Route 459 would be reduced to 3 inbound trips in the a.m. peak leaving Salem between 5:30 and 7:45 and 3 outbound trips in the p.m. leaving Downtown Crossing between 4:00 and 6:15. Route 455W Salem-Wonderland would be greatly expanded. On weekdays, this route presently operates inbound only during the a.m. peak. Outbound AM peak service and service operating every hour in both directions during middays and the PM peak would be added. This change would introduce full-time weekday service between locations served by Route 455 and Wonderland Station. An additional 50 passengers in the Route 455/459 corridor are expected to take advantage of the improved connections to the Blue Line.

During weekdays, 62 outbound passengers board at stops between Downtown Crossing and Logan Airport. 22 of these 62 passengers are on the

three outbound trips that would be retained. The remaining passengers are expected to use Route 455 from Haymarket or Route 455W from Wonderland. 144 passengers leave inbound buses at stops between Airport and Downtown Crossing, 22 of these passengers are on the trips that would be retained. As inbound Route 459 ridership is much higher than outbound, it appears that many passengers already choose whichever service in the common segment arrives first. These passengers are also expected to utilize Route 455 service to Haymarket or Route 455W service to Wonderland as a replacement.

Route 456: Salem – Central Sq. Lynn

★ **NO Change Recommended, Preliminary Proposal Withdrawn**

The proposal to discontinue the 8:30 AM trip is withdrawn, as another proposal to redirect its resources has also been withdrawn.

Route 456 links Central Sq., Lynn with Salem weekday middays only. Service was inaugurated in 2002. The 8:30 outbound trip is proposed for discontinuance due to low ridership. New run times will address schedule adherence issues.

Route 465/468: Danvers – Salem

✓ **MINOR Change Recommended, As Found in Preliminary Plan**

Route 465 links Danvers with Salem via Peabody, and was inaugurated in June 2002 to replace a former contracted service Route 718. At the same time, most former Route 458/468 service was either truncated or redirected, and Danvers-Salem service via

Water/Margin/North Streets was reduced to two weekday-only round trips (Route 468).

As these routes function as part of an integrated service in conjunction with the municipality of Peabody, their unique structures limit the potential to meet performance criteria. Thus no weekday changes are recommended. A new Saturday schedule should address performance failures on Saturdays.

Route 500: Riverside – Downtown Boston

This express bus operates on weekdays during commuter hours between Riverside Station and Downtown Boston.

This route does not meet the MBTA's schedule adherence standard based on observations from Winter 1999. However, a number of schedule adjustments have since been made to improve on-time performance. No further changes are recommended.

Route 501: Brighton Center – Downtown Boston via Oak Square

★ **NO Change Recommended, Preliminary Proposal Withdrawn**

Due to the mixed response received regarding this proposal, the proposed reroute via the Allston Turnpike exit is on hold until further running time analysis can be performed.

Route 501 provides express weekday service between Brighton Center and Downtown Boston via Oak Square.

Due to afternoon traffic back-ups at the Newton Corner exit to the Masspike, it is suggested that outbound Route 501 trips exit at the Allston tolls and travel to Brighton Center via Cambridge St. and

Union Square. Since most customers exit between Oak Square and Brighton Center, this is expected to reduce aggregate passenger delay. However, some customers near Newton Corner may see longer travel times. 26 inbound reverse commuters, or an average of 1.6 passengers per trip, would continue to board at normally “inbound” stops; however, trips would no longer stop on Winship St. or hold their time at Brighton Center. An alternate proposal would be to have only a portion of trips between 4:30 PM and 6:00 PM, when Newton Corner traffic is heaviest, travel via Cambridge St on a trial basis until further run time information is collected.

Route 502: Watertown Square – Copley Square

Route 502 is an express route that provides weekday peak period service between Watertown Square and Copley Square.

This route does not meet the MBTA’s load or schedule adherence standards. However, a number of schedule improvements have already been implemented since ridership was last collected. No further changes are recommended.

Route 503: Brighton Center – Copley Square

★ MINOR Change Recommended, ALTERED from Preliminary Plan

Due to the mixed response, the proposed reroute via the Allston Turnpike exit is on hold until further running time analysis can be performed. The improved morning service was implemented in March 2006.

Route 503 is a new express bus route from Brighton Center to Copley Square

via Oak Square.

Preliminary ridership counts for this route show that the 8:00 AM and 8:20 AM inbound trips are heavily used with 58 and 47 boardings, respectively. There have been a number of reports of morning reliability problems, as well. It is recommended that an extra bus be added to the line in the morning rush. Service from 7:20 AM to 8:20 AM would be improved from 2 buses every 20 minutes to 3 buses every 15 minutes. This change is anticipated to attract 20 new riders due to the frequency improvement, although it is unclear how many might be attracted due to the reliability improvement as well.

Similar to the Route 501 proposal, due to afternoon traffic back ups at the Newton Corner exit to the Masspike, it is suggested that outbound Route 503 trips exit at the Allston tolls and travel to Brighton Center via Cambridge St and Union Square. This is expected to reduce aggregate passenger delay. However, some customers near Newton Corner may see longer travel times. Any inbound reverse commuters would continue to board at normally “inbound” stops, however trips would no longer stop on Winship St. or hold their time at Brighton Center. An alternate proposal would be to have only a portion of trips travel via Cambridge St. on a trial basis until further run time information is collected.

Route 504: Watertown Square – Downtown Boston

Route 504 is an express route that provides weekday and Saturday service between Watertown Square and downtown Boston.

This route did not meet the loading or reliability standards when last checked. A number of schedule adjustments have already been implemented to bring the passenger loads and route reliability to within acceptable levels. Furthermore, there are plans to begin operating 60-foot articulated buses on this route beginning with the Winter 2006 rating with an associated decrease in frequency due to the increase in capacity on the 60-foot buses. No further changes are suggested on this route until the results of this change can be quantified.

Route 505: Central Square, Waltham – Downtown Boston

Route 505 provides weekday express service between Central Square, Waltham and downtown Boston via West Newton and the Turnpike

This route did not meet the reliability or cost performance standards. A number of schedule adjustments have already been implemented to improve route performance. No further changes are recommended until new ridership counts are collected.

Route 553: Brandeis/Roberts – Downtown Boston via Newton

★ MINOR Change Recommended, ALTERED from Preliminary Plan

The proposal to improve Saturday cost performance by increasing the frequency to every 90 minutes was replaced with a more modest proposal to eliminate only the first trip on Saturday morning while keeping the hourly service. The new proposal reduces the number of vehicle hours by 1.5 hours rather than 5.4.

Route 553 provides local service between Brandeis/Roberts, Central Sq., Waltham, and Newton Corner via West

Newton with express service to Boston via the Turnpike on weekdays.

On Saturdays, the route fails the net cost per passenger standard. It is recommended that the frequency be modified to operate every 90 minutes rather than hourly. Although this nominally does not comply with the frequency standard, only a small portion of the service area would experience this frequency. The portion of the Route 553 between Newton Corner and Central Square, Waltham is served by the Route 554, and the shared corridor would have combined headways of 45 minutes. Only the stops along South St. and Main St. would have non-compliant frequencies. There are 88 boardings or alightings on Saturday along the unique segment of the route, or approximately 36% of the total Saturday ridership. It is estimated that 45 fewer passengers would use the Route 553 due to this change. The net cost per passenger would improve to \$4.28 (rather than \$5.21), which nearly passes the net cost per passenger standard. This route also does not meet the reliability standard; as more detailed run time data become available, adjustments will be made to the schedule through the quarterly process of service changes.

There was a separate request to extend the route from its current terminus in the Roberts neighborhood in Waltham into Weston near I-95; however, this extension is not recommended and is discussed in section III.

Route 554: Waverley Square – Downtown Boston**★ MINOR Change Recommended,
ALTERED from Preliminary Plan**

The proposal to improve Saturday cost performance by increasing the frequency to every 90 minutes was replaced with a more modest proposal to eliminate only the first trip on Saturday morning while keeping the hourly service. The new proposal reduces the number of vehicle hours by 1.5 hours rather than 6.6.

Route 554 provides weekday and Saturday service between Waverley Sq. and Newton Corner via West Newton and Central Sq., Waltham. On weekdays, the route continues express to downtown Boston via the Turnpike

On Saturdays, the route fails the net cost per passenger standard; therefore, it is recommended that the route operate every 90 minutes rather than hourly. Although this nominally does not comply with the frequency standard, only a portion of the service area would experience this frequency. The portion of the Route 554 between Newton Corner and Central Square, Waltham is served by the Route 553, and the common portion of the route would have combined headways of 45 minutes. Only the stops between Waverley Sq. and Central Sq., Waltham would have non-compliant frequencies. There are 66 passenger boardings or alightings on Saturday along the unique segment of the route, or approximately 34% of the total Saturday ridership. It is estimated that 37 fewer passengers would use the Route 554 due to this change. This change would lower the net cost per passenger to \$6.02 (from \$7.65), which still fails the net cost per passenger standard. This route also does not meet

the reliability standard; as more detailed run time data become available, adjustments will be made to the schedule through the quarterly process of service changes.

Route 556: Waltham Highlands – Downtown Boston via Newton

Route 556 provides weekday service between Waltham Highlands and Newton Corner via Central Square, Waltham. During rush hours, the route continues express between Newton Corner and Downtown Boston via the Turnpike.

This route does not meet the reliability standard. A number of schedule adjustments are recommended.

Route 558: Riverside – Downtown Boston via Waltham

Route 558 provides weekday service between Riverside and Newton Corner via Central Square, Waltham. During rush hours, the route continues express between Newton Corner and Downtown Boston via the Turnpike.

This route did not meet the reliability standard when last checked. However, the route has been restructured since then. No schedule changes are recommended until new data are collected.

There is a proposal to change the terminus from Riverside Station to Woodland Station. However, it is suggested that a decision on this proposal be postponed until new data reflecting the Riverside terminus are collected.

New Route: Bellingham Square – Kendall Square**✓ NEW ROUTE Recommended,
As Found in Preliminary Plan**

This new service would operate from Bellingham Square in Chelsea to Kendall Station in Cambridge via Lechmere Station similar in routing to the CT6 that was developed as part of the Urban Ring study.

A number of customer requests were received to implement this service now to improve connections between Chelsea and Cambridge. In the Urban Ring MIS, such service was proposed to operate all day with a 10-minute headway during the peak periods and a 20-minute headway during the off-peak. Sufficient resources are not currently available to provide this frequency of service, but it is recommended that a limited level of service along this alignment be initiated on a pilot basis. This new route would operate as a commuter route, providing service every 30 minutes during the morning and afternoon peaks.

Utilizing ridership projections from the Urban Ring MIS, but reducing demand to the limited window of service proposed, it is estimated that the service recommended here would attract approximately 539 passengers. In addition it is unclear whether the MIS projections are accurate, as they assumed that other routes would also be in place. However, they do provide a starting point from which ridership projections for the proposed limited service could be estimated for planning purposes.

Once this service has been in place for a period of time, ridership data will be collected to determine whether the service is viable. This will help verify demand and test the feasibility of this

route. Depending on the demonstrated demand, service levels could be adjusted in the future.

Silver Line: Washington Street

The Silver Line Washington Street is a bus rapid transit line that provides service from Dudley Square in Roxbury to downtown, by way of the South End and Chinatown.

The service meets or exceeds the frequency and span standards for weekdays, Saturdays and Sundays, and passes the load standard on Saturdays and Sundays. It fails the load standard on weekdays by a small margin in the midday, and schedule adjustments have been made since data were last collected.

The Silver Line Washington Street fails the schedule adherence standard on weekdays, Saturdays and Sundays. The line began experiencing operational difficulties when the prototype Easy Way fareboxes were installed on them in February of 2005. In response a new schedule was created with additional running time, operational changes were instituted at Temple Place, fare collection procedures were altered and the fareboxes themselves were redesigned (in that order.) Given the number of changes that have occurred since the last service plan, and the modifications introduced in the fare collection procedures, specific changes for this route are not included in this preliminary plan. As additional information becomes available further schedule adjustments will be made to account for the improvements in fare collection time and to better leverage the operational changes on nights and weekends.

Silver Line: Waterfront

The Silver Line Waterfront is a bus rapid transit line that provides service from South Station to the South Boston Waterfront in an exclusive tunnel. From the end of the tunnel it has three branches that operate on surface streets: the SL1 to Logan Airport, the SL2 to Boston Marine Industrial Park, and the SL3 to City Point. The Silver Line Waterfront entered limited service in December of 2004, and the three existing branches were all in service by June 2005. As the service was introduced within the last two years it is exempt from changes in the 2006 Service Plan.

Schedule adjustments have been made since the last time load information was collected, so although the service failed the load standard within the trunk on weekdays at that time, no action is recommended. Running-time adjustments will be made to improve on-time performance.

Red Line: Ashmont or Braintree – Alewife

The Red Line provides heavy rail subway service through Boston and surrounding communities to the southeast and northwest. Service operates along two branches: the Ashmont branch, which terminates at Ashmont Station and serves three additional Dorchester neighborhood stations, and the Braintree branch which terminates at Braintree Station and serves five South Shore stations in Braintree and Quincy. A common trunk portion of the line operates from JFK/UMass to Alewife Station and stops in Boston, Cambridge, and Somerville.

The Red Line complies with the frequency standard at all times on weekdays and Saturdays. However, between the earliest trips on Sundays and again between the final trips on Sundays, there are brief intervals of 16-23 minute headways. Given the small number of trips at the ends of the service day, no change is recommended.

The Red Line did not meet the *Service Delivery Policy* standard for route reliability in the trunk portion or on either branch. The reliability standard calls for 95% of trips to operate actual headways that are within 1.5 times the scheduled headways, and for 95% of trips to operate within 5 minutes of the scheduled run time. The Red Line overall met the headway standard 88% of the time and met the run time standard 84% of the time in FY2005. Some of the reliability problems may be related to ongoing track restrictions due to temporary construction at the stations along the Dorchester Branch. Once construction is completed, it is recommended that additional analysis be conducted to determine if run time changes are needed.

Preliminary boarding counts taken along the Ashmont and Braintree branches and from South Station – JFK/UMASS show that average loads are within acceptable levels for all weekday time periods. Only partial counts are available at other Red Line stations, and so it is unclear how the remainder of the Red Line performs with respect to passenger loads.

Orange Line: Forest Hills – Oak Grove

✓ ***MINOR Change Recommended,
As Found in Preliminary Plan***

The Orange Line provides heavy rail subway service between Boston's southwest corridor and the surrounding communities due north from Downtown Boston.

The Orange Line complies with the frequency standard at all times on weekdays and Saturdays. However, from 6:00 AM to 9:30 AM on Sundays, the route operates every 17/18 minutes. Given that the actual run times on Sunday mornings were measured to be consistently less than the scheduled run times, it appears that the frequency can be improved to every 15 minutes by adjusting the run times without adding extra trains or operators. This would require adding approximately 0.25 hours of service.

The Orange Line passed the headway reliability standard by running within 1.5 scheduled headways 96% of the time with a target of 95%. However, the run times met the run time standard only 93% of the time with a target of 95%. It is recommended that the Orange Line run times be adjusted to reflect the measured run times.

Passenger counts conducted on weekdays Spring 2004 show that the Orange Line was within the MBTA's passenger load standard for all weekday time periods. The count was conducted during a period with evening substitute bus service at outer stations due to ongoing signal system construction; however, it is unlikely that this would have changed the line's compliance with the passenger load standards.

Blue Line: Wonderland – Bowdoin

The Blue Line provides heavy rail subway service between Wonderland Station in Revere and Bowdoin Station in Downtown Boston. With only twelve stations, the Blue Line is the shortest heavy rail line in the MBTA system. However, the line provides a valuable connection across Boston Harbor from East Boston and Revere to Downtown Boston.

The Blue Line met the frequency standard at all times on weekdays. However, the first two Saturday trips are separated by a 19-minute gap, and the last two Sunday trips are separated by a 21-minute gap. The standard calls for 15-minute headways or better. Given the very small number of trips involved, no change is recommended.

The Blue Line is the only heavy rail line that met both on-time performance standards. The Blue Line ran within 1.5 scheduled headways 96% of the time and ran within 5 minutes of the scheduled run time 95% of the time.

Passenger counts conducted on weekdays in Fall 2003 show that the Blue Line met the passenger loading standard in the core area, defined as Bowdoin – Aquarium, for all weekday time periods. In the non-core areas, defined as Aquarium – Wonderland, a separate load standard exists. The Blue Line did not meet the non-core load standard in the Midday Base, Evening, and Late Evening time periods because trips in these time periods typically had some standees. The line's peak load point is located between Maverick and Aquarium, which corresponds to the natural barrier of Boston Harbor. Given this ridership profile, it is recommended that the core area be redefined to include

Maverick. The Blue Line would pass the loading standard in all time periods with this change in definition.

Green Line: Boston College, Cleveland Circle, Riverside, or Heath St – Lechmere or Government Center

✓ ***MINOR Change Recommended, As Found in Preliminary Plan***

The Green Line provides light rail service on four branches to Boston College, Cleveland Circle, Riverside, and Heath St. A trunk portion operates from Kenmore or Copley to Lechmere, although service from North Station to Lechmere was closed for construction during the analysis period. Lechmere service resumed in November 2005.

The Green Line met the frequency standard at all times on the B, C, and E branches and the trunk portion of the line. The D branch did not meet the frequency standard on weekends due to a 20-21 minute gap between the last two evening trips. Given the small number of trips involved, no late-night changes to the D Line are recommended.

Overall, the Green Line did not meet either of the two schedule adherence standards. The headway standard calls for 95% of trips in the core area to operate on an actual 3-minute headway; 81% of trips did so when observed September 13 and 14, 2005. The run time standard calls for 95% of trips to operate within 5 minutes of the scheduled run time; 71% of observed trips did so. Of the 29% of Green Line trips that failed the run time standard, 26% were early and 3% were late.

On the surface, the B branch and the D branch did not meet the headway reliability standard of at least 85% of

trips operating within 1.5 scheduled headways; only 81% did so. The C branch and E branch passed with 85% and 90% of trips operating within 1.5 scheduled headways, respectively. The C and E branches have fewer stops than the B Line, and fewer miles and shorter run times than the B or D branches, which contributes to their improved headway reliability.

Of the four Green Line branches, none passed the run time standard of 95% of operating within 5 minutes of the scheduled run time. The B, C, and D branches had 61%, 68%, and 75% of trips within 5 minutes of the scheduled run time. Nearly all of the B, C, and D branch failures were due to trips that operated over 5 minutes faster than the scheduled run time. A number of run time adjustments are recommended to improve the run time reliability.

Since run time information is collected from the wayside signal system along the portions of the lines with dedicated rights-of-way, E Line inbound run times are only available between Brigham Circle and North Station. Outbound E Line run times were only available from North Station to Copley Square, which was considered too short of a segment to provide meaningful analysis. The E Line inbound between Brigham Circle and North Station operated within 5 minutes of the scheduled run time on 88% of observed trips, which did not meet the run time standard's target of having 95% of trips operate within 5 minutes of the scheduled run time. 11.3% of observed trips were late and 0.4% were early. A number of run time adjustments are recommended to improve the run time reliability.

Green Line loads were observed inbound at Copley Station and outbound at

Arlington Station on March 28 and 29, 2005. Using a five-point rating system, with "1" equal to an empty train and "5" equal to a full crush load, the average observed load for the B, C, D, and E branches was 2.8 during the peaks and 2.1 during the off-peak periods. Since the 225% load factor allowed during peak periods equates roughly to an observed load rating of 4, and the 140% load factor allowed during the off-peak period equates roughly to an observed load rating of 3, then Green Line as a whole and all branches meet the loading standard.

There were requests from the Longwood Medical Area for service on the D and E branches to both serve North Station. This change is not recommended at this time and is discussed in Section III.

Mattapan Trolley: Mattapan Station – Ashmont Station

The Mattapan Trolley provides light rail feeder service from Mattapan Station, a number of Milton neighborhoods, and the Lower Mills neighborhood of Boston. The trolley connects to the Red Line at Ashmont Station.

The Mattapan Trolley meets the span of service standard on weekdays, Saturdays, and Sundays. It also meets the frequency standard during most times of day. However, on Weekdays and Saturdays, there is a 17-24 minute gap between the first two trips and between the last two trips. On Sunday mornings before 9:30 AM, service operates every 30 minutes; in comparison, the standard calls for off-peak service every 15 minutes or better. It may be possible to improve the frequency to a trolley every 25 minutes rather than every 30 minutes without addition extra resources; however, given

that most trolley users are starting their trips at home at this time of morning, the easy-to-remember clockface headway is preferable to the 25-minute headway. Until additional operating resources are identified with which an additional vehicle could be added, no frequency change is recommended.

The Mattapan Trolley is the only light rail line that met both on-time performance standards. The Mattapan Trolley ran within 1.5 scheduled headways 92% of the time when observed in March 2005 and ran within 5 minutes of the scheduled run time 100% of the time.

Passenger loads were counted on weekdays in March 2005. Although a few trips had standees, the average load all day was 49% and for each time period all day was never higher than 88%. Since the loading standard calls for passenger volumes to be less than 225% of a seated load in peaks or less than 100% of a seated load in off-peaks, the Mattapan Trolley meets the vehicle load standard.

Service Standard Compliance Summary: Heavy Rail

Service Standard:	Blue	Orange	Red Ashmont Branch	Red Braintree Branch	Red Trunk	
Span of Service: Weekdays or Saturdays 6:00 AM – midnight. Sundays 7:00 AM – midnight.						
Weekday:	•	•	•	•	•	
Saturday:	•	•	•	•	•	
Sunday:	•	•	•	•	•	
Frequency of Service: Every 10 minutes or less in peaks & every 15 minutes or less off-peak.						
Weekday:	•	•	•	•	•	
Saturday:	✗	•	•	•	•	
Sunday:	✗ 19 min headway btwn first two trips	✗ 21 min headway btwn last two trips	17/18 min headway 6AM – 9:30AM	16-20 min headway btwn first & last trips	16-23 min headway btwn first & last trips	16 min headway btwn last trips
Schedule Adherence: At least 95% of trips within 1.5 scheduled headways and within 5 minutes of scheduled run time						
Headway:	• 96 %	• 96 %	✗ 90 %	✗ 87 %	✗ 85%	
Run time:	• 95 %	✗ 93 %	✗ 84 %	✗ 76 %	✗ 89%	

Vehicle Load: Average passengers/seats by time period in Early AM, AM Peak, Midday School, & PM Peak below 225% for Blue & Orange Lines and below 270-334% for Red Line. During Midday Base, Evening, and Late Evening, average passengers/seats below 140% in core for Blue & Orange Lines, below 140-174% in core for Red Line, and below 100% in non-core areas for Blue, Orange, & Red Lines.

	Core	Non-core	Core	Non-core	Non-core	Non-core	Core	Non-core*
Early AM:	•	•	•	•	•	•	○	•
AM Peak:	•	•	•	•	•	•	○	•
Midday Base:	•	✗	•	•	•	•	○	•
Midday School:	•	•	•	•	•	•	○	•
PM Peak:	•	•	•	•	•	•	○	•
Evening:	•	✗	•	•	•	•	○	•
Late Evening:	•	✗	•	•	•	•	○	•

Key: • = Complies ✗ = Does Not Comply – = Not Applicable ○ = No Recent Data

* Note: Red Line trunk non-core data only available for South Station – JFK/UMASS. Core and north-side non-core station ridership has not been counted since 1997.

Service Standard Compliance Summary: Light Rail

Service Standard:	Green Trunk	Green B Branch	Green C Branch	Green D Branch	Green E Branch	Mattapan Trolley
Span of Service: Weekdays or Saturdays 6:00 AM – midnight. Sundays 7:00 AM – midnight.						
Weekday:	•	•	•	•	•	•
Saturday:	•	•	•	•	•	•
Sunday:	•	•	•	•	•	•

Frequency of Service: Every 10 minutes or less in peaks & every 15 minutes or less in off-peak.

Weekday:	•	•	•	•	•	✗
						17-24 min gap betwn first two trips & last two
Saturday:	•	•	•	✗	•	✗
						17-24 min gap betwn first two trips & last two
Sunday:	•	•	•	✗	•	✗
						30 min headway before 9:30 AM; 24 min gap betwn last trips

Schedule Adherence: At least 85% of trips within 1.5 scheduled headways on branches, at least 95% of trips within 3-min. headways in trunk, and at least 95% of trips within 5 mins. of scheduled run time

Headway:	✗	✗	•	✗	•	•
	81 %	81 %	85 %	81 %	90 %	92 %
Run time:	–	✗	✗	✗	✗	•
		61 %	68 %	75 %	88 % *	100 %

*Inb only from Brigham Cir

Vehicle Load: Average number of passengers/seats by time period in Early AM, AM Peak, Midday School, & PM Peak below 225%. During Midday Base, Evening, and Late Evening, average number of passengers/seats below 140% in core areas and below 100% in non-core areas.

	Core	Core	Non-core	Core	Non-core	Core	Non-core	Core	Non-core	Non-core
Early AM:	•	•	○	•	○	•	○	•	○	•
AM Peak:	•	•	○	•	○	•	○	•	○	•
Midday	•	•	○	•	○	•	○	•	○	•
Base:										
Midday	•	•	○	•	○	•	○	•	○	•
School:										
PM Peak:	•	•	○	•	○	•	○	•	○	•
Evening:	•	•	○	•	○	•	○	•	○	•
Late Eve:	•	•	○	•	○	•	○	•	○	•

Key: • = Complies ✗ = Does Not Comply – = Not Applicable ○ = No Recent Data

III. BUS & RAPID TRANSIT PROPOSALS THAT ARE NOT RECOMMENDED

Through the initial 2006 Service Plan public process, data collection efforts, and on-going customer communications many more suggestions were received than could be implemented. The following is a listing of service changes that were suggested but were not recommended as a part of the Preliminary 2006 Service Plan. A brief explanation as to why they were not recommended is also included. General suggestions that related to perceived violations of any of the performance standards are not identified here, but were summarily addressed in the text on the recommended changes in the previous section.

South Boston Routes 5, 7, 9, and 10

There was a request to relocate the inbound Routes 5, 7, 9, and 10 from East Fourth St. onto East Broadway. However, this proposal awaits further discussion with BTD staff until questions about bus stop locations can be resolved.

Route 7: South Boston – Downtown via South Boston Waterfront

There were requests to simplify the route by eliminating the Harbor Industrial Park variation and instead traveling via Summer St. at all times. However, recent passenger counts from Fall 2004 show that the Harbor Industrial Park ridership in the outbound direction quadrupled to 66 passenger alightings since the previous count in Fall 2001. Given the spike in ridership, it is

recommended that follow-up counts be taken to confirm the volume of harbor Industrial Park ridership before any further action is taken.

Route 10: South Boston – Copley Square via Andrew

There was a request to discontinue Route 10 service to Copley Square and instead have the route terminate in the Longwood Medical Area. However, this change would require a major addition of new resources to maintain service between Copley and the Boston Medical Center. No change is suggested at this time. In the meantime, Route 10 riders to the Longwood Medical Area can transfer to the CT3 bus at Andrew.

Route 15: St. Peter's Square – Ruggles via Dudley

There was a proposal to provide increased service via Meeting House Hill; however doing so would require a slight decrease in the frequency during peak periods. Given the heavy peak ridership, this proposal is not recommended.

Route 18: Ashmont – Andrew via Dorchester Ave.

There was a request to extend the route to Copley/ Back Bay via the Boston Medical Center. However, this would require a major increase in resources and is not recommended at this time. It is suggested that Route 18 customers use a free bus-to-bus transfer to change between the Route 18 and Route 10 buses at Andrew.

Route 21: Ashmont – Forest Hills

A request was received for later Route 21 service weekdays and Saturday. In March 2005, Route 26 was modified to

service Blue Hill Avenue and Morton Street between 9:30 PM and 1:00 AM Monday-Saturday. This change allows passengers to transfer between Route 31 (Mattapan-Forest Hills) and Route 26. This service covers the same territory as Route 21, although a transfer is required. The MBTA will monitor ridership on Route 26, and will consider additional changes in the future based on demand.

Route 24: Wakefield and Truman – Mattapan

A suggestion to extend route 24 across the Truman Highway to the shopping plaza is not recommended. While this would only extend the route by a quarter-mile, much of the distance is in a parking lot, and the change would introduce two left turns on a busy road. The result would be a noticeable increase in running time and a negative impact on reliability. Only 20 people exit the bus at the stop closest to the plaza, and presumably they are not all going to the plaza. The benefit of saving these people a 1-2 minute walk would not offset the negative impact on the rest of the line. For these reasons the change is not recommended.

Route 34E: Walpole – Forest Hills

A request was received for additional service operating via Walpole Street. Service was introduced in this segment in March 2003. Seven outbound trips and six inbound trips operate via Walpole Street. Service brings customers to the Walpole commuter rail station in the AM and returns from the station in the PM. Midday service is also provided. Recent ridership data do not support operating additional service via this alignment.

A request was also received for additional late night service on Route 34.

In March 2005, an additional trip was added to Route 40 at 8:00 PM. This also provides additional service along Washington Street in much of the same corridor served by Route 34.

Route 35: Dedham Mall – Forest Hills

A request was received to route all Route 35 trips down Grove Street instead of Stimson Street, on the grounds that Stimson is too narrow and residential for bus traffic. Route 35 has served Stimson Street since 1965, and, while it is narrower than would be ideal, this has not historically been an operational problem.

The MBTA has received both requests to move the route and requests not to move the route from residents of Stimson Street. If the route were to move, 120 passengers who board or exit the bus on Stimson Street would be affected, as would 85 customers who board on Centre Street for a total of 205. All these customers would have a longer walk to the nearest Route 35 bus stop, and for 78 of them the change in walking distance would be more than a quarter-mile. People within a short walking distance of the stops on Grove Street would benefit, but, due to the geography of the area, there are about twice as many people within a short walking distance of the stops that would be discontinued, so overall ridership would go down. For these reasons a move to Grove Street is not recommended.

Route 39: Forest Hills – Back Bay

A request was received to discontinue additional service operating to

Longwood Avenue in the AM and replace with regular Copley service operating via Longwood. Such a change would increase the travel time for passengers traveling beyond Longwood Avenue.

A proposal was received to extend Route 39 service to Downtown Crossing. Connections can now be made at Copley to the Green Line or Back Bay station to the Orange Line for service to the Downtown area.

A suggestion was received to divert some trips to Brookline Village, either on their way to and from Forest Hills or as the endpoint of those trips. It is true that there is substantial activity at the corner of Huntington and South Huntington: over a thousand riders exit inbound or board outbound, and a number of these are transfers at Brookline Village. But, for each of those riders, there are more than five riders going through, and if trips were diverted to Brookline Village their additional collective travel time would well outweigh the collective savings of those transferring to or from Brookline Village. It might make sense to end some trips at Brookline Village if the service north of that point were underutilized, but instead this is roughly the peak load point of the route, and the buses do not start to empty out significantly until Northeastern. Therefore, if some trips only went to Brookline Village it would tend to worsen, not improve, crowding.

Route 51: Forest Hills – Cleveland Circle

A request was received for additional Route 51 service during the PM peak.

The most recent ridership data do not suggest a need for additional service based on loads. This suggestion is not recommended.

Route 52: Dedham Mall – Watertown Yard

A suggestion was made to add service to this route to increase ridership. It is usually inadvisable to add service to a route that already fails the cost standard. While it does attract new riders, the increase is not proportional to the amount of service added, and the cost per passenger becomes worse. In this case, if service were added to the midday (the least expensive time to add service), the change from service every 45 minutes to every 30 minutes would attract an estimated 30 riders, but at a cost of about five hundred dollars, or over \$16 per new passenger. This is, therefore, not recommended.

Route 59: Needham Junction – Watertown Square via Newton

There was a request provide service to Highland Ave. in Needham by modifying the Needham St. variant trips, which operate once for every 2-3 weekday trips, or every 90 minutes. Rather than traveling via Oak St., Chestnut St., and a portion of Central Ave. through Newton Upper Falls and a portion of Needham, the route would instead stay on Needham St. to Highland Ave., turn onto Gould St., and continue to Needham Junction via Central Ave., Webster St., and Highland Ave. When ridership was last counted in Fall 2001, stops along the portion of the route that would see a reduction in service served 68 inbound customers and 78 outbound customers. Currently service operates through Newton Upper Falls every 30

minutes in peaks and every 30-50 minutes in the off-peak; service would be reduced to operate with alternating 30- and 60-minute headways. It is not anticipated that the new ridership attracted from Highland Ave. would warrant the reduction in service to existing customers.

Route 60: Chestnut Hill – Kenmore Square via Boylston St.

There was a proposal to extend the Route 60 beyond Hammond Pond Parkway to the Chestnut Hill Mall and Atrium Mall. However, preliminary investigations showed a lack of appropriate bus stop locations and direct route options. No extension is recommended at this time. There are ongoing discussions of roadway modifications that may occur in conjunction with new commercial and residential developments in the area; these may allow for a modest route extension in the future.

Route 62: Bedford V.A. Hospital – Alewife via Arlington

A request was received for additional service. Because present loads do not suggest a need for additional service, this suggestion is not recommended.

Route 67: Turkey Hill – Alewife via Arlington Center

It was suggested that route 67 discontinue serve to the former Lahey Clinic site. The site is expected to be redeveloped soon and this should increase ridership there. While it is tempting to bypass the site until development is finished in order to give through-riders a faster ride, this would leave the few riders who still board/alight there stranded, and the time

savings could not be used to run service more frequently or provide any other broader benefits. For this reason it is recommended that the route continue to serve the clinic site until construction prevents it from doing so.

A request was made for late evening, Saturday, and Sunday service. Because present demand in the off-peak does not suggest there would be a strong demand for this service, this suggestion is not recommended.

Route 68: Harvard – Kendall via Broadway

A suggestion was received to add more service to improve reliability, especially in peak periods. The reliability problems that this route had been having were found to be a temporary operational issue, and not a problem with the route or schedule itself, so no change is recommended.

Routes 70 and 70A: Waltham–Central Square

A request was made for earlier inbound service on Route 70A, by diverting an existing Route 70 trip. A review of existing ridership shows low demand on the first 70A trip, and higher ridership on the Cedarwood section of the Route 70 trip under consideration to change. This suggestion is not recommended.

A request was also made for more frequent Saturday service traveling to Cedarwood or North Waltham. A review of data shows that ridership in the segment between Central Square Waltham and Cambridge is much heavier than between Cedarwood and Central Square or between North Waltham and Central Square. Existing

segment service levels are appropriate for demand.

A request was also made for more frequent rush-hour service. A review of existing ridership conditions determined that Route 70 and 70A are within standards. An additional review can be made in the future when new data are available.

A suggestion was also made to extend Route 70A to Alewife station. This would compete with an already existing shuttle service operated by the Route 128 Business Council. This change is not recommended.

Route 71: Watertown Square – Harvard via Mount Auburn St.

A request was made to reduce peak service on Route 73 and divert resources to provide more peak service on Route 71. A review determined that average load conditions on the two routes are similar.

Total weekday ridership on Route 73 is 55% higher than the total ridership on Route 71. Existing service frequencies reflect these service demands.

Route	Time	Average Loads			Total Ridership
		Entire Peak	30 min. maximum		
71	AM	35.5	49.2		660
	PM	29.2	45.7		643
73	AM	35.4	43.6		910
	PM	28	49.5		1116

Route 76: Hanscom - Alewife via Arlington

A suggestion was received to connect Lincoln Lab and Hanscom to a

commuter rail station in either Waltham or Concord. Modifying Route 76 to serve Belmont Center Station was considered, as it provides the closest commuter rail connection. Because this diversion would add over a mile to the alignment, the route would lose a greater number of customers to the increased running time than it would gain from improved connectivity. In addition, Route 76 currently has a very high net cost/passenger, even though it connects Hanscom with Alewife, a rapid transit station that provides greater transfer opportunities than a commuter rail station would. For these reasons, this suggestion was not recommended.

Route 77/77A: Arlington Heights – Harvard via Mass. Ave.

A suggestion was received to add more service to improve reliability, particularly in the PM peak. The 77 and 77A have recently experienced some running time problems due to ongoing construction at Porter Square, but, because this is a temporary situation, the Service Plan is not the place to address it. Operations will continue to monitor the route and make temporary adjustments as necessary.

A request was made for direct express service from Arlington Heights to Hynes Convention Center Station. Route 77 connects with Route 1 Harvard-Dudley, which operates frequent service. Route 77 also connects with the Red Line, which in turn connects with the Green Line. A new service from Arlington Heights to Hynes Convention Center would duplicate already existing alternatives. This suggestion is, therefore, not recommended.

New Combined Route 78/84/79

A suggestion was made to combine bus Routes 78, 79, and 84 as a route from Alewife to Arlington Heights to Arlmont and back to Harvard. This would result in an indirect routing and longer ride for existing Route 84 passengers between Arlmont and Alewife. This suggestion is, therefore, not recommended.

Route 79: Arlington Heights – Alewife

A request was made for Route 79 to operate Saturday and Sunday. Because Route 77 already provides service in this corridor Saturday and Sunday, this suggestion is not recommended.

A request was also made to extend Route 79 to Lexington. Routes 62 and 76 already provide service between Alewife and Lexington. This suggestion is, therefore, not recommended.

Route 86: Sullivan –Reservoir (Cleveland Circle) via Harvard

A request was made for more frequent Route 86 service. Changes have been made to the Route 86 schedule within the last year and these will be reviewed when new data are available to determine if the proper service levels are currently provided.

Route 87: Arlington Center – Lechmere via Davis, Union Square

A request was made to extend Route 87 from Arlington Center to Arlington Heights. Routes 77 and 79 presently connect Arlington Heights to Arlington Center with very frequent service and were transfers can be made to Route 87. This suggestion is, therefore, not recommended.

Route 88: Clarendon Hill – Lechmere via Davis

A request was made to extend Route 88 to Broadway and Sunnyside Avenue in Arlington. Because Route 87 already provides service along this segment of Broadway, this suggestion is not recommended.

Route 89 Clarendon Hill or Davis Square – Sullivan Station

A request was received to operate Route 89 more frequently than one bus every hour. However, during the late evening time period, when buses operate at hourly headways, there is not sufficient demand to add service. It was also suggested that the Davis branch operate later in the evening. This was not recommended, as a recent point check indicated that current demand on the last Davis trips does not demonstrate a need for later service.

Another request was made to provide additional Route 89 service by carrying passengers on some of the buses that pull back to the garage “Out of Service” along Broadway. This idea was evaluated, but is not being recommended at this time for several reasons. First, service is generally increased on a route if passenger loads become heavy enough to warrant the addition. Route 89 does not currently demonstrate the need for more service along Broadway. Second, to add the “Out of Service” trips to the Route 89 timetable would require additional resources, as the current “Out of Service” trips on other routes would have to wait for a scheduled Route 89 time, rather than pulling back to the garage directly after their last trip. At the present time, the benefits of adding trips on Route 89 do not outweigh the cost of doing so. However, for the

future, the MBTA will investigate the possibility system-wide of using of “Out of Service” trips to carry passengers.

A request was also made to extend Route 89 to Broadway & Sunnyside Avenue in East Arlington. This proposal is not being recommended as the suggested routing would add approximately 1.5 miles to each round trip, whereas, the walking distance from Clarendon Hill to Broadway & Sunnyside is less than a quarter mile. Also, passengers who prefer not to walk from Clarendon Hill to Broadway & Sunnyside can transfer to Route 87.

An additional request was made to have Route 89 operate on a 5-minute headway weekdays during the AM and PM Peak periods, making limited stops. This proposal was not recommended as the current Route 89 headway is 9 minutes during peak periods, and ridership does not warrant more frequent service. In addition, making limited stops would be a disservice to the many riders who currently board along the route.

Route 90: Davis Square Station – Wellington Station

In the 2004 Service Plan, Sunday service on Route 90 was requested. At that time, ridership levels on Saturday suggested that demand for Sunday service would be very low. It was, therefore, recommended that Sunday service be re-considered after new ridership data were available, if Saturday demand had increased significantly. New counts show that ridership has decreased on Saturday; therefore, Sunday service is not recommended at this time.

Route 92: Assembly Sq. Mall – Downtown via Main St.

A customer request was made to increase the frequency of service during the PM Peak, specifically around 6:00 PM. Headways during this time period are currently 10 – 15 minutes, and ridership is well within the loading standards; therefore, this change is not recommended.

A request was made to extend Route 92 from Assembly Square Mall to Wellington Circle Station in Medford on the Orange Line and to extend the route past Downtown Crossing to South Station. This proposal was not recommended, as it would add substantial running time, which would degrade the frequency of service unless additional resources were added.

A request was also made to operate Route 92 on a 5-minute headway, with limited stops. This proposal is not recommended, as the current Route 92 ridership does not warrant more frequent service. In addition, making limited stops would be a disservice to the many riders who currently board along the route.

Route 93: Sullivan Sq. Station – Downtown via Bunker Hill St.

A request was made to extend Route 93 past Downtown Crossing to South Station. This proposal is not recommended, as it would add substantial running time, which would degrade the frequency of service unless additional resources were added.

Route 101: Malden Center Station – Sullivan Square Station

A customer request was made for service more frequent than one bus every hour

on this route. However, at times when this route operates hourly (weekdays during the evening and late evening time periods; late evening on Saturdays; and all day on Sundays), current ridership does not warrant additional service.

Route 108: Linden Square – Wellington Station

A customer request was made to provide more frequent service weekdays during the midday, when the route serves elderly housing at #82 Pearl Street. Because this route currently operates on a 30-minute headway during this time period, and passenger loads do not warrant additional service, more frequent service is not recommended. Increased frequency of service was also requested on Sundays, when this route provides hourly service. Because Sunday ridership is well within the loading standards, this change is not recommended.

A request was also received to extend Route 108 past Linden Square to Northgate Shopping Plaza. This proposal was not recommended because Route 411 currently provides service from Malden Center Station through Linden Square to Northgate Shopping Center, and existing ridership to the mall (approximately 25 passengers per weekday and approximately 20 passengers per Saturday) does not warrant additional service.

Route 109: Linden Square – Sullivan Station

A request was made to extend Route 109 to Northgate Shopping Plaza. This proposal is not recommended because the additional running time to the mall would require that the frequency of service be reduced or more resources

added to this route. Because current ridership to Northgate on Route 411 is very low, extended service to the mall is not warranted at this time.

Route 114: Mystic Mall – Maverick Sta.

A proposal to extend Route 114 midday service beyond Mystic Mall to Admiral's Hill and Quigley Hospital (and in so doing eliminate these branches from Route 112) is not recommended. The midday ridership on Route 112 (about 27 boardings per trip half) does not justify added service, and this proposal would eliminate one-seat rides from the two aforementioned branches to the Orange Line at Wellington Station.

Route 132: Redstone Shopping Ctr. – Malden Ctr. Station

A request was made to add an outbound trip at around 6:00 PM. This is not currently recommended, as ridership levels do not warrant additional service.

A request was also made to directly serve the Stone Zoo. However, due to the difficulty of entering the Zoo parking lot in the outbound direction, without adding significant running time, this service is not recommended.

Route 136/137: Reading Depot – Malden Station

A customer request was made to provide additional weekday service due to crowding on Main Street. However, because ridecheck data from Winter 2005 show that this combined route does not exceed the vehicle load standard, additional service is not recommended at this time.

Route 214: Germantown – Quincy Center

A proposal for an added trip at 6:40PM on weeknights is not recommended since the average maximum load on the flanking trips (17) does not justify an added trip.

Routes 222 or 225: Quincy Center – East Weymouth or Weymouth Landing

Extensions of Routes 222 and/or 225 to various locations in or near Weymouth (such as residential and retail developments, a former military base, and healthcare facilities) are not recommended due to duplication with the privately-operated JBL Bus Lines local routes in that area and low anticipated ridership.

Routes 238/240 Quincy Center or Ashmont – Holbrook/Randolph Commuter Rail

A proposal for a new bus service on Warren Street/Mazzeo Drive (Highway 139) in Randolph is not recommended, since the two branches of the existing bus service there (Avon Line and Holbrook/Randolph Station) already utilize the full capabilities of Routes 238 and 240, and anticipated ridership does not justify a new service.

Route 326: West Medford – Haymarket via I-93

For this Service Plan, a request was made for later service: until at least 7:00 or 7:30 PM. Because the most recent data show that ridership is very low on the last two outbound trips (which depart Boston at 6:07 and 6:35 PM), later service is not recommended at this time.

Route 350: Burlington – Alewife

A request was made to extend Route 350 to Billerica. Connections can already be made with the Lowell Regional Transit Authority for service to Billerica. This suggestion is not recommended.

Route 354: Woburn – Boston

A request was considered for a stop at Medford Square on Route 354 outbound in the evening. This route currently makes a stop at Medford Square in the reverse-peak direction (outbound in the morning and inbound in the afternoon). This service was implemented to provide a reverse-commute option from Medford Sq. to Woburn by utilizing trips that carry very few passengers.

Stopping at Medford Sq. on peak direction trips is not recommended, as running times would need to be lengthened, which would negatively impact the current riders, who are traveling express from Boston to Woburn and Burlington. In addition, ample service from Boston to Medford Sq. is already provided via rapid transit to connecting local bus routes.

Route 411: Malden Ctr. Station – Revere/Jack Satter House

A customer request was made to provide later service on weekdays. However, a 7:55 PM outbound trip was added in the Fall of 2004, and ridership data do not show a need for additional later service.

Route 426/426W: Central Sq. Lynn – Haymarket or Wonderland

A proposal to redirect some Route 426 service to Malden in lieu of Revere or Boston is not recommended, as ample free transfer opportunities to Routes 108 and 109 are available at Linden Square,

and thus this mobility option is presently available.

A proposal to restore weekend service to Haymarket (in lieu of Wonderland) is not recommended, as this would impact service frequencies, and the future rollout of six-car Blue Line trains will make more seats and a more comfortable Blue Line ride available at Wonderland.

Route 429: Central Sq. Lynn – Northgate Shopping Center

A proposal to redirect Route 429 from U S Highway One to the Lynn Fells Parkway is not recommended due to limitations on the use of parkways by heavy vehicles, and due to geometric constraints at the highway/parkway interchange. Various proposals to improve connectivity between buses and commuter rail trains at Central Sq. Lynn is not recommended as they would have affected timed bus-bus transfers there. A proposal to redirect Route 429 to Saugus Center (either via a branch or redirection from Essex St to Central St) is not recommended due to low anticipated ridership and the impact that increased route length would have on Route 429. Only 13% of Saturday Route 430 ridership is accommodated north of the Square One Mall (i.e., near Saugus Center).

Route 430: Saugus Center – Malden Center Station

A customer request was made to extend Bus Route 430 past Saugus Square to the bus stop off of route 128 on the Lynnfield/Lynn line. Because the suggested routing would add approximately 8.3 miles to each round trip and would require significant additional resources to implement, this

proposal is not being recommended at this time.

Route 441: Marblehead – Boston & Route 455: Salem – Boston

A proposal for a combined Route 441/455 (Central Sq. Lynn – Salem via Vinnin Sq.) service is not recommended as this service is already available via free transfer at Vinnin Sq., and the ridership levels cannot justify any added service.

Routes 448 & 449: Marblehead – Boston

A proposal to eliminate Route 448 & 449 bypass service (e.g., have these buses serve the Central Sq. Lynn Busway) is not recommended due to peak period capacity constraints in the busway facility, and the availability of ample, largely coincident Route 441 and 442 service.

Route 451: Beverly – Salem

Various proposals to restore bus service to the Salem Willows community, such as via an extension of Route 451, are not recommended. Bus service to Salem Willows via former Route 453 (Salem-Salem Willows) was discontinued in 1978 due to low ridership (about 46 boardings per typical weekday). This proposal is not recommended due to low anticipated ridership and high operating costs relating to lengthy stem times from the Lynn garage.

Reinstate Route 454: Salem – Marblehead

A proposal to reinstate Route 454 (Salem-Marblehead), discontinued in 1979 due to low ridership, is not recommended, due to low anticipated ridership, and duplication of Route

441/448-455/459 service available via free transfer at Vinnin Sq.

Routes 455/ 459: Salem – Boston

A proposal to add a Route 459 stop at Airport Station is not recommended, as this would duplicate both existing MASSPORT service, and the Blue Line-Route 459 link at terminal C.

Another request to alter Routes 455 & 459 so as to serve identical stops at Vinnin Square as Routes 441 & 448 is not recommended due to geometric constraints.

Proposals to eliminate service to Shetland Park in Salem and reroute buses in Downtown Salem is not recommended, as these changes would inconvenience existing customers. For Route 455, Shetland Park is the seventh busiest inbound (boarding) and second busiest outbound (alighting) stop.

A request for more bus service to Salem State College is not recommended since the existing service is presently underutilized. Routes 455/455W and 459 serve Loring Avenue at the college site. Utilization of the bus stops nearest the campus totals approximately 78 persons per typical weekday, which is insufficient to justify a service expansion, particularly since the college is near the outbound terminal of Routes 455/455W and 459, and as such the buses are well beyond their peak load points. Any perceived need for additional service, perhaps to coincide with class schedules, might be more appropriately addressed by the college itself, as many similar academic institutions already provide campus shuttles.

Route 553: Brandeis/Roberts – Downtown Boston via Newton

There was a proposal to extend the route from its current terminus in the Roberts neighborhood in Waltham into Weston near I-95; however, this extension would be expected to attract few if any new riders, would require a modest decrease in frequency to accommodate the longer route, and would exacerbate the already high net cost per passenger. The Weston I-95 extension is, therefore, not recommended.

Silver Line Washington Street

A suggestion was received to run some Silver Line Washington Street service to Logan. The suggestion was that buses would drive up Washington Street from Dudley, turn right onto Herald, and travel to the airport on the interstate system. While this would connect customers along Washington Street to the airport, buses taking this route would not stop at New England Medical Center, Chinatown, Downtown Crossing or Boylston. Three quarters of customers' trips on Silver Line Washington either begin or end at these stops. While it would serve the airport, it would not offer a transfer to any other rapid transit line, so there would be no benefit to Green or Orange line customers wanting to go to the airport. This makes the line comparable to the CT3, which once connected Dudley with the Airport; that portion of the route had low ridership and was discontinued. Therefore this change cannot be recommended.

New Route: Arlington Center – Sullivan Square

A request was received to initiate a new route from Arlington Center to Sullivan

Square, serving Winchester Center, West Medford, and Medford Square. This proposal is not recommended for two primary reasons. First is the length of the proposed routing, which would require significant new resources to operate. Second is the existence of other bus routes along most of the suggested alignment, and the lack of demonstrated demand for additional service on these routes.

New Route: Wellington-Harvard

A request was made for a new route from Wellington to Harvard Square via Sullivan. Service is already available by connecting between the Red and Orange Lines between these two points. Route 90 already provides service between Davis Square and Wellington. Route 89 also now provides service between Davis Square and Sullivan. This change is not recommended.

New Route: Belmont Center - Alewife

A suggestion was received to start a new route that would connect Belmont to Alewife. This would allow Belmont residents faster access to the Red Line. The route studied would start in Belmont Center and travel on Concord Ave. to the Alewife Brook Parkway rotary, where it would take the rotary to Alewife Brook Parkway and then enter Alewife Station. One-way trip time would be 18 minutes. Modeling showed that, if this route were added at a half-hour headway in the AM and PM peaks only, it would attract about 700 riders, of whom 500 would be diverted from routes 74, 75, and 78, and of whom 200 would be new transit riders. Because riders would be diverted from these other routes it would make sense to reduce service on them to pay

for the new route. A reduction in service on those routes sufficient to pay for this new route would result in a net loss of transit ridership. A Belmont Center to Alewife route is not recommended.

New Route: Arlington Center – Watertown

This new route would respond to a request for service from Arlington to Watertown without customers having to travel through Harvard Square. It would also respond to two requests for service across Belmont with improved connections to Arlington buses. The proposed route would run from Arlington Center to Pleasant Street, Belmont Center, Pleasant Street, Waverley St., Waverly Sq., Lexington St., Orchard St., Common Street and Mt. Auburn Ave. to Watertown Sq. At minimum service levels to meet frequency and span of service standards, this route would cost \$1,941 per weekday to operate while attracting an estimated 265 riders. At \$7.33 per passenger, this route would fail the net cost per passenger standard, and is, therefore, not recommended.

Another similar suggestion to provide service in same area between Watertown and Medford was also not recommended due to the increased cost of the additional distance, and only marginal projected increase in ridership.

South Shore Express Bus

Various proposals to inaugurate express bus service from Quincy and Braintree to Downtown Boston are not recommended due to duplication with the privately-operated JBL Bus Lines express route in that area, and duplication with the Old Colony

Commuter Rail service that performs the same function.

Marina Bay

A proposal for bus service to Marina Bay in Squantum is not recommended as privately-operated shuttle bus service is already provided there, and low ridership levels are anticipated (several privately operated water transportation services to Marina Bay have been discontinued due to low ridership).

Quincy – Attleborough/Stoughton Line Bus Connection

A proposal for bus service linking the Quincy/Braintree area to the Attleborough/Southgton commuter rail line is not recommended due to low anticipated ridership. A Boston-Quincy-Canton bus service operated by Interstate Coach was discontinued in 2004 due to low ridership, and various services available by connection (e.g., Route 245 to Mattapan Station, to Route 33 to Hyde Park Station) allow Quincy-Attleborough type service without transferring at South Station..

Restore Route 718 Service

A request to partially restore former Laidlaw/ABC Bus Company Route 718 service (replaced by MBTA bus Route 465 in June of 2002), at least in the vicinity of Shaughnessy Kaplan Rehabilitation Hospital, is not recommended since the ridership does not merit an expansion of the existing, proximate service on Highland Avenue (Routes 450, 450W, and 456). Proposals to improve Route 450/450W service will partially address the request for better service to the hospital.

New: Expanded Danvers Service Area

Requests to expand service in Danvers, in the vicinity of Highway 114, to North Shore Community College on Ferncroft Road, and on existing routes is not recommended due low ridership potential and cost of operating a service that is so far from the existing MBTA bus service network that terminates at Danvers Square. Service on Route 468 beyond Danvers Square, a service similar to the new routes that were requested for consideration, was discontinued in 2002 due to low ridership.

New: Lynn-Wonderland “East – West” Connecting Service

A request to inaugurate a new bus service to Central Sq. Lynn meeting the last Blue Line train at Wonderland is not recommended since Route 426 already performs this function, from Haymarket on weekdays and Wonderland on the weekends.

New: Peabody/U S Highway 1 Area

A request to inaugurate a new bus service along U S Highway 1 in Peabody is not recommended due to low anticipated demand, geometric constraints and safety concerns, and duplication of Route 436 service and the City of Peabody's local bus service.

New: Beachmont Area

A request to inaugurate a bus service into a new retail development on Revere Beach Parkway is not recommended since the development is already adequately served by the abutting Route 119 (about 1,500 feet from the anchor

store entrance) and the Beachmont Blue Line station (about 3,000 feet away).

Redirected Service: Boston to Wonderland

Proposals to redirect all Boston bound service from the North Shore to Wonderland is not recommended due to the capacity of the Blue Line (currently, 4-car trains) and the inconvenience to existing customers that this would cause. Presently, Haymarket boardings and alightings account for 31% of all Route 426, 441/442, and 455 ridership. However, a reduction in the number of 459 trips into Downtown Crossing, with an increase in the 455 trips to Wonderland and changing the 448 and 449 trips to 441 and 442 trips to Wonderland is recommended.

Additional Bus Service to Logan Airport

The recently inaugurated SL1 Bus Rapid Transit service and new Airport Blue Line Station address the needs for mass transit service to Logan Airport. In addition improved access is proposed through greater use of Central Square to Wonderland connections to the Blue Line. At Airport station connections are possible by the Logan Airport shuttle service provided by MASSPORT.

Express Bus, Vinnin Sq. – Wonderland

A proposal for an express bus from Vinnin Sq. to Wonderland is not recommended, as this service is already provided by Route 448, and the ridership levels do not merit added service.

Lynn Service to Wonderland East

A proposal to route all Lynn service to Wonderland East is not recommended,

as this would add to running times (particularly in the AM peak) and thus inconvenience Downtown Boston-bound customers.

Direct Lynn Bus Service to the Swampscott Commuter Rail Station

A proposal to route MBTA Lynn buses directly past the Swampscott Station is not recommended, as this transfer opportunity is already available at Central Sq., Lynn, and would involve geometric constraints.

Red Line Express Service

A proposal for Braintree express or skip-stop trains is not recommended, since realistically only two stops (selected from Quincy Adams, Wollaston, and North Quincy) could be bypassed, and travel time savings would thus be outweighed by the inconvenience such a service would introduce. Old Colony commuter rail trains that serve South Station, JFK U Mass, Quincy Center, or Braintree perform this function already.

Green Line: Boston College, Cleveland Circle, Riverside, or Heath St – Lechmere or Government Center

There were requests from the Longwood Medical Area for both the D and E branches to serve North Station. With the restoration of service to Lechmere, the E branch terminates at Lechmere, the C branch terminates at North Station, and the B and D branches terminate at Government Center. There is an operational advantage to having the B and D branches turn at Government Center. In general, since the passenger demand for travel beyond Government Center is less than the demand for travel

to the Back Bay area and Park St., turning some lines earlier allows for better use of the limited number of Green Line vehicles in the fleet. Furthermore, the B and D Lines in particular are the least reliable of the four Green Line branches. Since longer routes tend to be the less reliable, there are compelling operational advantages to short-turning the less-reliable routes. Therefore, no change in the Green Line routes serving at North Station are recommended at this time.

IV. PROPOSALS FOR FUTURE CONSIDERATION

The following section provides information on the proposals that were not proposed for immediate implementation, as doing so would require additional resources, information, or a change in conditions in the area.

Route 24: Wakefield and Truman – Mattapan &

Route 27: Ashmont – Mattapan

A suggestion was received to combine routes 24 and 27 entirely, through-routing most trips and identifying the entire route as route 27. This would require undoing some changes that were introduced in the 2004 service plan (changes which affect not only routes 24 and 27 but also route 30.) In general, changes that are implemented through one service plan are not modified in the subsequent service plan, but are given more time for demand to mature before being evaluated. Additionally, the Mattapan Trolley construction is expected to have a major impact on Routes 24 and 27, and it would create confusion to introduce a change while the construction is on going. This idea should be studied later.

Route 112/114 Swap at Maverick

Proposals to replace midday Route 114 service on Meridian Street with Route 112 service (redirected from Wood Island) is not recommended since it would be confusing to the passengers to catch the bus at Wood Island during some times of the day, then to Maverick, then back to Wood Island. It is proposed to reconsider this concept when the

construction activity at the Maverick station is completed and if the 112 can then berth there during the peak periods.

Route 134: North Woburn – Wellington Station

For the 2006 Service Plan, a request was made to extend Sunday service to North Woburn. It is MBTA policy not to evaluate a new service or service extension in the Service Plan subsequent to its implementation, but to wait until the next following Service Plan to allow time for ridership to grow. Because Sunday service was extended to Woburn Square through the 2004 Service Plan, it is premature to make additional changes until new data can be collected for the Sunday service to Woburn Square. If ridership levels indicate sufficient demand, extending service to North Woburn will be considered in the 2008 Service Plan

Route 211:Quincy Center - Squantum

A request for later service on Route 211 to Squantum will be deferred, as later service was already inaugurated in the Spring of 2005, and some time will be needed to observe demand in that regard.

Route 351: Bedford – Alewife

A proposal was received to operate revenue service on both directions on Route 351, which presently operates only toward Bedford in the a.m. and toward Alewife in the p.m., provided a park and ride facility can be identified in Bedford.

The span of service would be fairly limited, as only trips arriving at Bedford Woods at 6:52 a.m., 7:30 a.m., and 8:00 a.m. return to Alewife, while only trips

arriving at Alewife at 4:00 p.m., 4:30 p.m., 5:00 p.m., and 5:30 p.m. return to Bedford Woods. Other trips return to or from the garage facilities in Charlestown. There would be an added cost in vehicle miles and hours to operate these trips in service to and from Alewife.

The potential demand for such service appears low. Presently, Route 62 a.m. peak trips operating inbound only have 10 passengers boarding along Great Road or Bedford Street in Bedford. These trips presently have scheduled running times of 39 minutes between Bedford VA Hospital and Alewife. While Route 351 trips operating express via Route 128 and Route 2 may have somewhat shorter running times, the low demand for existing Route 62 service within Bedford does not suggest a strong demand for additional express service.

However, if a park and ride facility can be located that does not require additional running time for the trips to serve it, this proposal is recommended.

Greenbush Line Feeder Service

Various proposals to restructure bus service in Hingham and Weymouth so as to feed the Greenbush Commuter Rail Line (now under construction) will be considered after that service is operational.

Enhanced Transfer Opportunities

Proposals to enhance timed transfer opportunities at selected locations (e.g., Central Sq., Lynn and Vinnin Sq.) are best considered after the new running times and schedules proposed in this plan are implemented, and their impact on service reliability and connectivity can be ascertained. Connections with a

temporal window of less than ten minutes are highly susceptible to day-to-day traffic-related run time vagaries.

With the technology that is being installed on the new buses we will be better able to accurately assign time to the various portions of the routes. As these data become available this will improve our ability to create reliable timed transfers at Lynn and Vinnin Square.

V. SERVICE DELIVERY POLICY CHANGE RECOMMENDATIONS

The MBTA's *Service Delivery Policy* was first established in its current form in 1996 through a joint effort of the MBTA, the Executive Office of Transportation and Construction and the Conservation Law Foundation. The intent of the 1996 *Service Delivery Policy* was to improve the MBTA's performance by adopting best-practice techniques for planning and evaluating services. Implementation of the 1996 *Service Delivery Policy* was guided by a Service Standards Technical Advisory Committee (SSTAC).

The 1996 *Service Delivery Policy* anticipated that future revisions to the policy would be necessary. Accordingly, a number of modifications were proposed through the MBTA's Preliminary 2002 Service Plan, and the SSTAC was subsequently reconvened to review them. The SSTAC forwarded some of the proposed changes to the MBTA Board of Directors, but held others for further consideration. Those sent to the Board were approved, in concept, on December 5, 2002, but were not immediately incorporated into the text of the *Service Delivery Policy*.

The SSTAC continued to meet during 2003 and 2004 to discuss other modifications to the *Service Delivery Policy* that were deemed of importance to the committee. As a result, a number of changes to the *Service Delivery Policy* were taken to the public with the Preliminary 2004 Service Plan and were approved by the MBTA Board of Directors on September 9, 2004. These changes included revisions to Chapter 1: Introduction, Chapter 2: Services &

Service Objectives, and Chapter 3: Service Standards.

With this service plan, the MBTA presented additional revisions to the *Service Delivery Policy*. These revisions were reviewed by the public with the Preliminary 2006 Service Plan, but no substantive changes to the proposals were necessary as a result of the public process.

The current revisions focus primarily on Chapters 4 – 7 of the existing policy, which outline the service planning process. These chapters have been streamlined and updated to more accurately reflect the current service planning process. In addition, two minor changes have been made to Chapter 3. Following is a summary of the changes that are currently proposed. The full text of the proposed changes can be found in Appendix D.

Service Delivery Policy – 2006 Summary of Recommended Changes

Chapter 3: The Introduction to Chapter 3 has been revised to clarify the nature and use of the Service Standards and to highlight the relationship between the service planning process and the budgeting process.

Also in Chapter 3, in the Vehicle Load Standard, the definition of the outer boundary of Blue Line Core Area has been changed from Aquarium to Maverick, as the line's peak load point is located between these two stations.

Chapter 4: The former Chapter 4: Service Evaluation Process, Chapter 5: Development of a Biennial Service Plan, Chapter 6: Implementation of Service Changes, and Chapter 7: Public Process have been consolidated into a single

Chapter 4: Service Planning Process. Although the 1996 *Service Delivery Policy* established Service Standards for all MBTA modes, it addressed only the bus service planning process in Chapters 4 – 7. As a result, the Service Plans that have been produced since 1996 have focused exclusively on changes to bus services. Although the new Chapter 4 also addresses only the bus service planning process, it includes placeholders for sections that will outline the service planning process for rapid transit, commuter rail, and commuter boat. As the SSTAC continues its work, these sections will be completed, and it is anticipated that they will be forwarded to the public for review with the 2008 Service Plan.

The substantive changes found in the new Chapter 4 include:

- More explicit delineation of the differences and similarities between the on-going bus service planning process and the Biennial Service Plan process.
- Consolidation of the types of service changes from three categories minor, moderate, and major into just two categories: minor & major.
- Elimination of redundant and out-dated material.
- Elimination of content that should be included in departmental planning guidelines rather than in the text of the *Service Delivery Policy*.
- Inclusion of references to the Americans with Disabilities Act and Title VI of the Civil Rights Act of 1964 in the discussion of the service planning public participation process.

VI. TITLE VI and ENVIRONMENTAL JUSTICE REVIEWS

To comply with Title VI of the Civil Rights Act of 1964, the MBTA analyzes all the Preliminary and the Final Service Plans to ensure that the proposed/recommended service changes do not discriminate against minority communities.

For Title VI, the MBTA completes the “Level of Service” analysis for Vehicle Load, Frequency of Service, and Schedule Adherence (using the service standards in the *Service Delivery Policy*) by comparing the performance of minority bus routes against the bus system as a whole. This analysis is completed on the Preliminary Plan and again on the Final Plan. Also completed on the Final Plan is the Title VI “Level of Service” analysis for Transit Access (using the Transit Coverage standard in the *Service Delivery Policy*) and the Title VI “Quality of Service” analysis that measures fares, transfers, travel miles, and travel time for sample trips between the ten most densely populated minority traffic analysis zones (TAZs) and the three TAZs with the highest densities of work-trip attractions. These are compared to the fares, transfers, travel miles, and travel time for sample trips between the 10 most densely populated non-minority residential TAZs and same three work-atraction TAZs to determine whether there are any minority/non-minority discrepancies.

The results of the “Level of Service” analysis for Vehicle Load, Frequency of Service, Schedule Adherence for the proposals in the Preliminary Plan and the recommendations in the Final Plan show that a larger percentage of minority bus

routes pass the load standard on weekdays and the frequency and schedule adherence standards on weekdays, Saturdays and Sundays than the percentage of all bus routes in the system.¹ Minority bus routes show a slightly lower percentage passing load standard on Saturdays and Sundays than the system as a whole; however, these minority routes show greater improvement on weekend vehicle load than the system as a whole.

The “Level of Service” analysis for Transit Access and the Quality of Service analysis for the recommendations in the Final 2006 Service Plan were completed by the Central Transportation Planning Staff of the Boston Metropolitan Planning Organization (MPO). A higher percentage of minority routes meet the Transit Access standard than the system as a whole, and minority routes compare favorably with non-minority routes for the “Quality of Service” analysis

In addition to the MBTA’s Title VI analysis, the MPO performs an environmental justice analysis. The MPO has adopted the following definition of environmental justice:

“Environmental Justice requires the MPO to:

- examine the allocation of benefits and burdens, currently and in the planned future,*
- ensure that minority and low-income communities are treated equitably in*

¹ With the exception of some Quincy Routes and the Silver Line that were not included in the analysis, as they underwent extensive modifications subsequent to the 2004 Service Plan.

the provision of transportation services and projects, and

- provide full participation for minority and low-income communities to advise the MPO during its planning and decision-making process.*

The examination of Environmental Justice will include consideration of patterns of capital investment and allocation that have contributed to present conditions and inform current and future MPO decisions."

The Boston MPO uses the following measures to assess environmental justice aspects of transit services:

- vehicle load
- frequency of service
- schedule adherence
- transit amenities (including shelter availability)
- vehicle assignment (age, air conditioning, emissions profile)

For most measures, the available data tends to confirm that the MBTA is treating minority and low-income communities equitably in the provision of transportation services. A complete assessment of the environmental justice review completed to date can be found in the *Boston MPO Transportation Plan 2000-2025*.

APPENDIX A:

Summary Analysis of Routes and Recommended Changes

Weekday bus service, current and proposed

"X"=failed, "I"=failed but improved

Route number	Description	Current						Standards				Proposed						Standards				Change				Route number							
		Peak Hours	Off peak hours	Total hours	Miles	Total cost	Ridership	Average fare	Avg. cost / pax.	Span	Frequency	Loading	Sched. Adher.	Net cost/pax.	Minor	Peak Hours	Off peak hours	Total hours	Miles	Total cost	Ridership	Avg. cost / pax.	Span	Frequency	Loading	Sched. Adher.	Net cost/pax.	Peak Hours	Off peak hours	Total hours	Miles	Ridership	
1 Harvard Sq - Dudley Sta. via Mass. Ave.		46.9	109.0	155.9	1100	\$15,140	12758	\$0.60	\$0.59		X	X			Minor	46.9	109.0	155.9	1100	\$15,140	12758	\$0.59		I	I			0.0	0.0	0.0	0	0	1
4 North Station - World Trade Ctr.		10.5	2.7	13.2	72	\$1,510	271	\$0.60	\$4.97		X	X			None	10.5	2.7	13.2	72	\$1,510	271	\$4.97		X	X			0.0	0.0	0.0	0	0	4
5 City Point - McCormack Housing		0.5	5.6	6.1	41	\$524	118	\$0.60	\$3.84	X	X	X			Moderate	0.5	5.6	6.1	45	\$536	133	\$3.43	X	I			0.0	0.0	0.0	4	15	5	
6 South Station - Haymarket Sta.		3.8	3.6	7.4	51	\$784	364	\$0.60	\$1.55		X				Minor	3.8	3.6	7.4	51	\$784	373	\$1.50		X				0.0	0.0	0.0	0	9	6
7 City Point - Otis & Summer Sts.		33.4	34.4	67.7	475	\$7,154	2881	\$0.60	\$1.88		X				None	33.4	34.4	67.7	475	\$7,154	2881	\$1.88		I				0.0	0.0	0.0	0	0	7
8 Harbor Point /U Mass - Kenmore Sta.		31.4	66.1	97.6	838	\$10,014	5039	\$0.60	\$1.39		X				None	31.4	66.1	97.6	838	\$10,014	5039	\$1.39		X				0.0	0.0	0.0	0	0	8
9 City Point - Copley Sq. via Broadway Sta		28.5	54.6	83.0	677	\$8,488	4032	\$0.60	\$1.51		X				Minor	28.5	57.0	85.4	702	\$8,713	4071	\$1.54		X				0.0	2.4	2.4	25	39	9
10 City Point - Copley Sq. Via BU Med Ctr		20.9	47.6	68.4	479	\$6,646	3054	\$0.60	\$1.58		X				None	20.9	47.6	68.4	479	\$6,646	3054	\$1.58		X				0.0	0.0	0.0	0	0	10
11 City Point - Downtown		27.6	49.1	76.6	704	\$8,130	2263	\$0.60	\$2.99		X				Minor	27.6	47.6	75.1	683	\$7,973	2274	\$2.91		I				0.0	-1.5	-1.5	-21	11	11
14 Roslindale Square - Heath Street Loop		11.3	23.5	34.9	395	\$3,867	1359	\$0.60	\$2.25	X	X				Moderate	11.3	23.9	35.3	401	\$3,911	1369	\$2.26	X	I			0.0	0.4	0.4	7	10	14	
15 Kane Sq. - Ruggles Sta.		27.9	68.9	96.8	742	\$9,525	6936	\$0.60	\$0.77		X				None	27.9	68.9	96.8	742	\$9,525	6936	\$0.77		X				0.0	0.0	0.0	0	0	15
16 Forest Hills Sta. - U Mass.		20.9	43.3	64.2	655	\$6,904	4350	\$0.60	\$0.99		X				None	20.9	43.3	64.2	655	\$6,904	4350	\$0.99		I				0.0	0.0	0.0	0	0	16
17 Fields Corner Sta. - Andrew Sta.		14.6	31.2	45.8	324	\$4,486	3741	\$0.60	\$0.60		X				None	14.6	31.2	45.8	324	\$4,486	3741	\$0.60		X				0.0	0.0	0.0	0	0	17
18 Ashmont Sta. - Andrew Sta.		5.4	12.9	18.3	160	\$1,858	688	\$0.60	\$2.10	X	X	X			Minor	6.3	14.1	20.4	176	\$2,080	740	\$2.21		X				0.9	1.2	2.1	17	52	18
19 Fields Corner Sta. - Ruggles or Kenmore Sta.		23.4	29.7	53.1	447	\$5,702	2058	\$0.60	\$2.17		X				None	23.4	29.7	53.1	447	\$5,702	2058	\$2.17		I				0.0	0.0	0.0	0	0	19
21 Ashmont Sta. - Forest Hills Sta.		15.3	30.3	45.7	451	\$4,891	4147	\$0.60	\$0.58		X				None	15.3	30.3	45.7	451	\$4,891	4147	\$0.58		X				0.0	0.0	0.0	0	0	21
22 Ashmont Sta. - Ruggles Sta. Via Talbot Ave		40.5	78.3	118.9	1105	\$12,550	8349	\$0.60	\$0.90		X				None	40.5	78.3	118.9	1105	\$12,550	8349	\$0.90		X				0.0	0.0	0.0	0	0	22
23 Ashmont Sta. - Ruggles Sta. via Washington St.		52.7	121.2	173.9	1350	\$17,271	12910	\$0.60	\$0.74		X	X			None	52.7	121.2	173.9	1350	\$17,271	12910	\$0.74		X				0.0	0.0	0.0	0	0	23
24 Wakefield Ave. - Mattapan Sta. or Ashmont		7.2	23.1	30.2	288	\$3,072	1599	\$0.60	\$1.32		X				None	7.2	23.1	30.2	288	\$3,072	1599	\$1.32		I				0.0	0.0	0.0	0	0	24
26 Ashmont Sta. - Norfolk & Wash. Belt		7.6	20.6	28.1	248	\$2,837	1474	\$0.60	\$1.32		X				Minor	7.6	20.6	28.1	248	\$2,837	1474	\$1.32		I				0.0	0.0	0.0	0	0	26
27 Mattapan Sta. - Ashmont Sta.		3.8	9.9	13.6	117	\$1,369	451	\$0.60	\$2.44	X	X				None	3.8	9.9	13.6	117	\$1,369	451	\$2.44	X	I				0.0	0.0	0.0	0	0	27
28 Mattapan Sta. - Ruggles Sta.		52.0	123.3	175.3	1504	\$17,788	12058	\$0.60	\$0.88		X	X			Minor	53.0	124.3	177.3	1515	\$17,993	12077	\$0.89	I	X				1.0	1.0	2.0	11	19	28
29 Mattapan Sta. - Jackson Sq Sta.		16.4	29.1	45.4	433	\$4,868	2063	\$0.60	\$1.76		X				Minor	16.4	29.1	45.4	433	\$4,868	2063	\$1.76		I				0.0	0.0	0.0	0	0	29
30 Mattapan Sta. - Roslindale Sq.		8.9	25.8	34.8	334	\$3,572	2126	\$0.60	\$1.08		X				None	8.9	25.8	34.8	334	\$3,572	2126	\$1.08		I				0.0	0.0	0.0	0	0	30
31 Mattapan Sta. - Forest Hills Sta.		20.3	46.6	66.9	662	\$7,067	4955	\$0.60	\$0.83		X				None	20.3	46.6	66.9	662	\$7,067	4955	\$0.83		I				0.0	0.0	0.0	0	0	31
32 Wolcott Sq or Cleary Sq. - Forest Hills Sta.		33.0	73.9	106.9	1227	\$11,824	8246	\$0.60	\$0.83		X				Moderate	34.0	75.4	109.4	1312	\$12,281	8246	\$0.89		X				1.0	1.5	2.5	86	0	32
33 River & Milton Sts. - Mattapan Sta.		8.2	13.1	21.3	242	\$2,420</td																											

Weekday bus service, current and proposed

"X"=failed, "I"=failed but improved

Route number	Description	Current						Standards		Proposed						Standards		Change				Route number											
		Peak Hours	Off peak hours	Total hours	Miles	Total cost	Ridership	Average fare	Avg. cost / pax.	Span	Frequency	Loading	Sched. Adher.	Net cost/pax.	Minor	Peak Hours	Off peak hours	Total hours	Miles	Total cost	Ridership	Avg. cost / pax.	Span	Frequency	Loading	Sched. Adher.	Net cost/pax.	Peak Hours	Off peak hours	Total hours	Miles	Ridership	
64	Oak Sq. - University Pk. Cambridge	16.2	28.5	44.7	439	\$4,834	1608	\$0.60	\$2.41	X					Minor	15.7	28.5	44.2	435	\$4,768	1597	\$2.39	I					-0.5	0.0	-0.5	-4	-11	64
65	Brighton Center - Kenmore Sta.	13.0	23.0	36.0	270	\$3,640	1456	\$0.60	\$1.90	X	X				None	13.0	23.0	36.0	270	\$3,640	1456	\$1.90	X	X				0.0	0.0	0.0	0	0	65
66	Harvard Sq. - Dudley Sta. via Brookline	48.0	117.3	165.3	1261	\$16,255	11088	\$0.60	\$0.87	X	X				None	48.0	117.3	165.3	1261	\$16,255	11088	\$0.87	X	X				0.0	0.0	0.0	0	0	66
67	Turkey Hill - Alewife Sta.	6.8	11.8	18.6	215	\$2,115	493	\$0.60	\$3.69	X					None	6.8	11.8	18.6	215	\$2,115	493	\$3.69	X					0.0	0.0	0.0	0	0	67
68	Harvard Sq. - Kendall MIT Sta.	3.5	8.6	12.1	110	\$1,244	520	\$0.60	\$1.79	X					Minor	3.5	8.6	12.1	110	\$1,244	520	\$1.79	I					0.0	0.0	0.0	0	0	68
69	Harvard Sq. - Lechmere Sta.	13.6	30.5	44.1	292	\$4,242	3388	\$0.60	\$0.65	X					None	13.6	30.5	44.1	292	\$4,242	3388	\$0.65	I					0.0	0.0	0.0	0	0	69
70	Cedarwood - Central Sq. Cambridge	25.3	67.8	93.1	1073	\$10,154	5069	\$0.60	\$1.40	X	X				None	25.3	67.8	93.1	1073	\$10,154	5069	\$1.40	X	X				0.0	0.0	0.0	0	0	70
70A	No. Waltham - University Pk., Camb.	16.7	25.2	41.9	519	\$4,919	1790	\$0.60	\$2.15	X	X	X			None	16.7	25.2	41.9	519	\$4,919	1790	\$2.15	X	X	X			0.0	0.0	0.0	0	0	70A
71	Watertown Sq. - Harvard Sta.	29.4	66.0	95.3	885	\$9,718	4997	\$0.60	\$1.34	X					None	29.4	66.0	95.3	885	\$9,718	4997	\$1.34	I					0.0	0.0	0.0	0	0	71
72	Aberdeen & Mt. Auburn - Harvard Sta.	8.3	17.6	25.9	233	\$2,633	703	\$0.60	\$3.15	X					None	8.3	17.6	25.9	233	\$2,633	703	\$3.15	I					0.0	0.0	0.0	0	0	72
73	Waverley Sq. - Harvard Sta.	44.5	73.1	117.6	1207	\$12,703	5862	\$0.60	\$1.57	X					None	44.5	73.1	117.6	1207	\$12,703	5862	\$1.57	X					0.0	0.0	0.0	0	0	73
74	Belmont Center - Harvard Sta via Concord Ave	7.9	19.3	27.2	317	\$2,998	981	\$0.60	\$2.46	X					Minor	7.9	19.3	27.2	317	\$2,998	981	\$2.46	I					0.0	0.0	0.0	0	0	74
75	Belmont Center - Harvard Sta via Fresh Pond Pkwy	3.7	7.2	10.9	130	\$1,230	487	\$0.60	\$1.93	X	X	X			Minor	3.7	7.2	10.9	130	\$1,230	487	\$1.93	X	X	I			0.0	0.0	0.0	0	0	75
76	Hanscom Air Force Base - Alewife Sta.	10.8	21.5	32.3	625	\$4,365	626	\$0.95	\$6.02	X	X				None	10.8	21.5	32.3	625	\$4,365	626	\$6.02	I	X				0.0	0.0	0.0	0	0	76
77	Arlington Heights - Harvard Sta	47.4	109.5	156.9	1562	\$16,598	7887	\$0.60	\$1.50	X	X				None	47.4	109.5	156.9	1562	\$16,598	7887	\$1.50	X	I				0.0	0.0	0.0	0	0	77
78	Arlmont Village - Harvard Sta	15.5	36.6	52.1	710	\$6,073	1149	\$0.60	\$4.69	X	X				Moderate	15.5	31.6	47.1	637	\$5,541	1124	\$4.33	X					0.0	-5.0	-5.0	-74	-25	78
79	Arlington Heights - Alewife Sta.	13.0	25.5	38.5	352	\$4,043	1095	\$0.60	\$3.09	X					None	13.0	25.5	38.5	352	\$4,043	1095	\$3.09	X					0.0	0.0	0.0	0	0	79
80	Arlington Center - Lechmere Sta.	15.4	34.7	50.1	508	\$5,343	1872	\$0.60	\$2.25	X					None	15.4	34.7	50.1	508	\$5,343	1872	\$2.25	X					0.0	0.0	0.0	0	0	80
83	Ridge Ave. - Central Sq., Camb.	14.3	30.1	44.4	346	\$4,454	2154	\$0.60	\$1.47	X					Minor	14.3	30.1	44.4	346	\$4,454	2154	\$1.47	I					0.0	0.0	0.0	0	0	83
84	Arlmont Loop - Alewife Sta.	4.5	1.3	5.8	78	\$798	221	\$0.60	\$3.01	X					None	4.5	1.3	5.8	78	\$798	221	\$3.01	X					0.0	0.0	0.0	0	0	84
85	Spring Hill - Kendall MIT Sta.	3.6	9.6	13.2	108	\$1,311	402	\$0.60	\$2.66	X					Minor	4.1	9.6	13.7	112	\$1,377	424	\$2.65	I					0.5	0.0	0.5	4	22	85
86	Sullivan Sta. - Cleveland Circle	26.4	54.5	81.0	699	\$8,335	5139	\$0.60	\$1.02	X					None	26.4	54.5	81.0	699	\$8,335	5139	\$1.02	I					0.0	0.0	0.0	0	0	86
87	Clarendon Hill - Lechmere Sta. via Som.	17.6	39.2	56.8	514	\$5,879	3720	\$0.60	\$0.98	X					None	17.6	39.2	56.8	514	\$5,879	3720	\$0.98	X					0.0	0.0	0.0	0	0	87
88	Clarendon Hill - Lechmere Sta. Via Hgln	20.2	37.6	57.7	482	\$5,954	4299	\$0.60	\$0.78	X					None	20.2	37.6	57.7	482	\$5,954	4299	\$0.78	X					0.0	0.0	0.0	0	0	88
89	Clarendon Hill - Sullivan Sta.	21.1	33.5	54.6	441	\$5,676	3586	\$0.60	\$0.98	X					None	21.1	33.5	54.6	441	\$5,676	3586	\$0.98	X					0.0	0.0	0.0	0	0	89
90	Davis Sq. Sta. - Wellington Sta.	6.1	18.9	25.0	252	\$2,590	920	\$0.60	\$2.22	X	X				None	6.1	18.9	25.0	252	\$2,590	920	\$2.22	X	X				0.0	0.0	0.0	0	0	90
91	Sullivan Sta. - Central Sq., Camb.	8.2	20.9	29.1	201	\$2,786	1482	\$0.60	\$1.28</																								

Weekday bus service, current and proposed

"X"=failed, "I"=failed but improved

Route number	Description	Current						Standards				Proposed						Standards				Change				Route number							
		Peak Hours	Off peak hours	Total hours	Miles	Total cost	Ridership	Average fare	Avg. cost / pax.	Span	Frequency	Loading	Sched. Adher.	Net cost/pax.	Minor	Peak Hours	Off peak hours	Total hours	Miles	Total cost	Ridership	Avg. fare	Avg. cost / pax.	Span	Frequency	Loading	Sched. Adher.	Net cost/pax.	Peak Hours	Off peak hours	Total hours	Miles	Ridership
120	Orient Heights Sta. - Maverick Sta.	13.8	35.8	49.6	455	\$5,079	2718	\$0.60	\$1.27	X					Minor	13.8	35.8	49.6	455	\$5,079	2772	\$1.23		I	I			0.0	0.0	0.0	0	54	120
121	Wood Island Sta. - Maverick Sta.	3.5	2.6	6.1	41	\$662	373	\$0.60	\$1.17	X					None	3.5	2.6	6.1	41	\$662	373	\$1.17		X				0.0	0.0	0.0	0	0	121
131	Melrose Highlands - Malden Sta.	8.1	10.0	18.1	236	\$2,199	476	\$0.60	\$4.02	X					Minor	8.1	9.2	17.3	226	\$2,120	473	\$3.88		I				0.0	-0.8	-0.8	-10	-3	131
132	Redstone Shopping Ctr. - Malden Sta.	4.4	13.1	17.5	216	\$1,936	504	\$0.60	\$3.24	X					None	4.4	13.1	17.5	216	\$1,936	504	\$3.24		X	I			0.0	0.0	0.0	0	0	132
134	North Woburn - Wellington Sta.	14.5	33.3	47.8	542	\$5,259	1623	\$0.95	\$2.29	X					None	14.5	33.3	47.8	542	\$5,259	1623	\$2.29		X				0.0	0.0	0.0	0	0	134
136	Reading Depot - Malden Sta. Via Lakeside	10.0	19.2	29.2	401	\$3,472	876	\$0.95	\$3.01	X					None	10.0	19.2	29.2	401	\$3,472	876	\$3.01		X	X			0.0	0.0	0.0	0	0	136
137	Reading Depot - Malden Sta. Via North Ave	9.4	17.5	26.8	376	\$3,220	833	\$0.95	\$2.92	X	X	X	X		None	9.4	17.5	26.8	376	\$3,220	833	\$2.92		X	X	X		0.0	0.0	0.0	0	0	137
170	Oak Park - Dudley Sta. (Limited Service)	1.4	3.0	4.4	87	\$598	27	\$1.88	\$20.29	X	X	X	X		None	1.4	3.0	4.4	87	\$598	27	\$20.29		X	X	X		0.0	0.0	0.0	0	0	170
171	Logan Airport - Dudley Sta. Sunrise	0.0	1.3	1.3	17	\$129	21	\$1.88	\$4.28	X					None	0.0	1.3	1.3	17	\$129	21	\$4.28		X	X			0.0	0.0	0.0	0	0	171
216	Quincy Ctr. Sta. - Houghs Neck	10.7	22.2	33.0	412	\$3,771	965	\$0.60	\$3.31	X					None	10.7	22.2	33.0	412	\$3,771	965	\$3.31		X				0.0	0.0	0.0	0	0	216
217	Wollaston Sta - Ashmont Sta via Wollaston Beach	4.9	7.8	12.7	155	\$1,473	207	\$0.60	\$6.52	X	X	X			None	4.9	7.8	12.7	155	\$1,473	207	\$6.52		X	X	X		0.0	0.0	0.0	0	0	217
225	Quincy Ctr. Sta. - Weymouth Landing	18.8	29.2	48.0	558	\$5,511	2028	\$0.60	\$2.12	X					None	18.8	29.2	48.0	558	\$5,511	2028	\$2.12		X				0.0	0.0	0.0	0	0	225
245	Quincy Ctr. Sta. - Mattapan Sta.	6.2	11.8	17.9	211	\$2,026	407	\$0.60	\$4.38	X	X				None	6.2	11.8	17.9	211	\$2,026	407	\$4.38		X	X			0.0	0.0	0.0	0	0	245
325	Elm St. - Haymarket Sta.	12.8	4.8	17.5	256	\$2,432	359	\$1.88	\$4.90	X		X			Minor	12.5	4.8	17.2	249	\$2,381	355	\$4.83	X	X	I		-0.3	0.0	-0.3	-7	-4	325	
326	West Medford - Haymarket Sta.	13.7	4.2	17.8	283	\$2,575	467	\$1.88	\$3.64	X					Minor	13.7	4.2	17.8	283	\$2,575	477	\$3.52		X				0.0	0.0	0.0	0	10	326
350	North Burlington - Alewife Sta.	18.0	34.4	52.4	865	\$6,663	1537	\$0.95	\$3.39	X					None	18.0	34.4	52.4	865	\$6,663	1537	\$3.39		X				0.0	0.0	0.0	0	0	350
351	Oak Park - Alewife Sta.	5.9	3.5	9.4	245	\$1,581	180	\$1.88	\$6.91	X	X				Moderate	5.9	3.5	9.4	261	\$1,630	188	\$6.79		X	I			0.0	0.0	0.0	16	8	351
352	Burlington - State Street	7.6	5.3	12.9	332	\$2,139	425	\$2.85	\$2.18	X					Minor	7.6	5.3	12.9	332	\$2,139	425	\$2.18		X				0.0	0.0	0.0	0	0	352
354	Woburn Line - State Street	14.1	20.8	34.9	715	\$4,948	802	\$2.85	\$3.32	X					Minor	15.2	20.8	36.0	731	\$5,114	802	\$3.53		X				1.1	0.0	1.1	16	0	354
355	Mishawum Sta. - State Street	1.5	1.8	3.3	53	\$434	15	\$2.85	\$26.09	X	X				None	1.5	1.8	3.3	53	\$434	15	\$26.09		X	X			0.0	0.0	0.0	0	0	355
411	Malden Sta. - Revere/Jack Satter House	5.7	17.4	23.1	307	\$2,613	823	\$0.60	\$2.57	X	X				None	5.7	17.4	23.1	307	\$2,613	823	\$2.57		X	X			0.0	0.0	0.0	0	0	411
424	Eastern & Essex - Haymarket or Wonderland	5.0	1.1	6.0	89	\$862	160	\$2.85	\$2.54	X					None	5.0	1.1	6.0	89	\$862	160	\$2.54		X				0.0	0.0	0.0	0	0	424
426	Central Sq Lynn - Haymarket Sta. Via Clifondale S	19.1	43.4	62.5	888	\$7,413	1618	\$2.85	\$1.73	X	X				Minor	19.1	42.9	62.0	870	\$7,326	1611	\$1.70		I	I			0.0	-0.5	-0.5	-19	-7	426
428	Oaklandvale - Haymarket via Granada Highlands	4.2	1.9	6.0	94	\$844	154	\$2.85	\$2.63	X	X				Minor	4.2	1.9	6.0	94	\$844	154	\$2.63		X	I			0.0	0.0	0.0	0	0	428
429	Northgate Shopping Center - Central Sq Lynn	14.7	30.3	44.9	634	\$5,357	1165	\$0.60	\$4.00	X					None	14.7	30.2	44.8	633	\$5,349	1165	\$3.99		I	I			0.0	-0.1	-0.1	-1	0	429
430	Saugus, Appleton St. - Malden Sta.	8.1	19.7	27.7	362	\$3,172	854	\$0.60	\$3.11	X	X				None	8.1	19.7	27.7	362	\$3,172	854	\$3.11		X	X			0.0	0.0	0.0	0	0	430
431	Neptune Towers - Central Sq Lynn	0.7	2.3	3.0	30	\$311	92	\$0.60	\$2.																								

Weekday bus service, current and proposed

"X"=failed, "I"=failed but improved

Route number	Description	Current						Standards		Proposed						Standards		Change				Route number								
		Peak Hours	Off peak hours	Total hours	Miles	Total cost	Ridership	Avg. fare	Avg. cost / pax.	Span	Frequency	Loading	Sched. Adher.	Net cost/pax.	Peak Hours	Off peak hours	Total hours	Miles	Total cost	Ridership	Avg. fare	Avg. cost / pax.	Span	Frequency	Loading	Sched. Adher.	Net cost/pax.	Peak Hours	Off peak hours	Total hours
505 Waltham Center - Federal & Franklin Sts.		26.9	17.6	44.5	1017	\$7,023	896	\$2.85	\$4.99	X	X	Major	28.9	18.5	47.4	1110	\$7,569	930	\$5.29	X	X	2.0	0.9	2.9	93	34	505			
553 Roberts - Federal & Franklin Sts.		9.0	19.4	28.4	455	\$3,536	662	\$1.50	\$3.84	X	None	9.0	19.4	28.4	455	\$3,536	662	\$3.84	X		0.0	0.0	0.0	0	0	553				
554 Waverley Sq. - Federal & Franklin Sts.		7.5	20.8	28.3	474	\$3,522	659	\$1.50	\$3.84	X	None	7.5	20.8	28.3	474	\$3,522	659	\$3.84	X		0.0	0.0	0.0	0	0	554				
556 Waltham Highlands - Federal & Franklin Sts.		8.6	11.0	19.6	276	\$2,437	462	\$1.50	\$3.78	X	None	8.6	11.0	19.6	276	\$2,437	462	\$3.78	X		0.0	0.0	0.0	0	0	556				
558 Auburndale - Federal & Franklin Sts.		8.3	8.8	17.1	279	\$2,274	391	\$1.50	\$4.32	X	None	8.3	8.8	17.1	279	\$2,274	391	\$4.32	X		0.0	0.0	0.0	0	0	558				
CT1 Central Sq. Camb. - So. End Medical Area		14.3	24.8	39.0	260	\$3,856	2507	\$0.53	\$1.01	X	None	14.3	24.8	39.0	260	\$3,856	2507	\$1.01	I		0.0	0.0	0.0	0	0	CT1				
CT2 Sullivan Sta. - Kendall MIT Sta. - Ruggles Sta		21.6	33.3	54.8	448	\$5,737	1636	\$0.53	\$2.98	X	None	21.6	33.3	54.8	448	\$5,737	1636	\$2.98	I		0.0	0.0	0.0	0	0	CT2				
CT3 Longwood Medical Area - Andrew Sta.		11.7	22.4	34.1	284	\$3,509	1029	\$0.53	\$2.89	X	None	11.7	22.4	34.1	284	\$3,509	1029	\$2.89	X		0.0	0.0	0.0	0	0	CT3				

Note: Per policy, most Quincy service not shown due to recent major changes.

Saturday bus service, current and proposed

"X"=failed, "I"=failed but improved

Route number	Description	Current					Standards				Proposed					Standards				Change			Route number				
		Hours	Miles	Total cost	Ridership	Average fare	Avg. cost / pax	Span	Frequency	Loading	Sched. Adher.	Net cost/pax.	Type of change	Hours	Miles	Total cost	Ridership	Avg. cost / pax	Span	Frequency	Loading	Sched. Adher.	Net cost/pax.	Hours	Miles	Ridership	
1	Harvard Sq - Dudley Sta. via Mass. Ave.	135.3	990	\$11,408	9495	\$0.60	\$0.60		X	X			Minor	135.3	990	\$11,408	9495	\$0.60		X	I			0.0	0.0	0.0	1
5	City Point - McCormack Housing	5.7	38	\$473	158	\$0.60	\$2.39	X	X	X			Moderate	5.7	42	\$485	173	\$2.20	X	I			0.0	4.0	15.0	5	
7	City Point - Otis & Summer Sts.	17.3	147	\$1,517	405	\$0.60	\$3.15		X		None		17.3	147	\$1,517	405	\$3.15		I				0.0	0.0	0.0	7	
8	Harbor Point /U Mass - Kenmore Sta.	44.3	459	\$4,136	1064	\$0.60	\$3.29		X		None		44.3	459	\$4,136	1064	\$3.29		X				0.0	0.0	0.0	8	
9	City Point - Copley Sq. via Broadway Sta	49.7	444	\$4,426	2105	\$0.60	\$1.50		X		Minor		52.1	469	\$4,650	2141	\$1.57		X				2.4	25.0	36.0	9	
10	City Point - Copley Sq. Via BU Med Ctr	48.7	387	\$4,200	1718	\$0.60	\$1.84		X		None		48.7	387	\$4,200	1718	\$1.84		X				0.0	0.0	0.0	10	
11	City Point - Downtown	51.7	466	\$4,623	1510	\$0.60	\$2.46		X		Minor		50.2	445	\$4,467	1516	\$2.35		X				-1.5	-21.1	6.0	11	
14	Roslindale Square - Heath Street Loop	32.2	390	\$3,177	901	\$0.60	\$2.93		X		Minor		32.2	390	\$3,177	901	\$2.93		I				0.0	0.0	0.0	14	
15	Kane Sq. - Ruggles Sta.	60.4	509	\$5,291	3753	\$0.60	\$0.81		X		None		60.4	509	\$5,291	3753	\$0.81		X				0.0	0.0	0.0	15	
16	Forest Hills Sta. - U Mass.	31.6	336	\$2,977	2356	\$0.60	\$0.66	X	X		None		31.6	336	\$2,977	2356	\$0.66	X	I				0.0	0.0	0.0	16	
17	Fields Corner Sta. - Andrew Sta.	28.9	267	\$2,602	2132	\$0.60	\$0.62		X		None		28.9	267	\$2,602	2132	\$0.62		X				0.0	0.0	0.0	17	
18	Ashmont Sta. - Andrew Sta.	9.4	86	\$845	220	\$0.60	\$3.24	X		X	None		9.4	86	\$845	220	\$3.24	X	X				0.0	0.0	0.0	18	
21	Ashmont Sta. - Forest Hills Sta.	15.4	158	\$1,430	987	\$0.60	\$0.85		X		None		15.4	158	\$1,430	987	\$0.85		X				0.0	0.0	0.0	21	
22	Ashmont Sta. - Ruggles Sta. Via Talbot Ave	89.5	866	\$8,174	4960	\$0.60	\$1.05		X		None		89.5	866	\$8,174	4960	\$1.05		X				0.0	0.0	0.0	22	
23	Ashmont Sta. - Ruggles Sta. via Washington St.	97.3	916	\$8,811	6903	\$0.60	\$0.68	X	X		None		97.3	916	\$8,811	6903	\$0.68		X				0.0	0.0	0.0	23	
24	Wakefield Ave. - Mattapan Sta. or Ashmont	32.2	321	\$2,973	955	\$0.60	\$2.51		X		None		32.2	321	\$2,973	955	\$2.51		I				0.0	0.0	0.0	24	
26	Ashmont Sta. - Norfolk & Wash. Belt	19.9	175	\$1,766	774	\$0.60	\$1.68		X		Minor		19.9	175	\$1,766	774	\$1.68		I				0.0	0.0	0.0	26	
28	Mattapan Sta. - Ruggles Sta.	130.0	1329	\$12,084	10744	\$0.60	\$0.52	X	X		None		130.0	1329	\$12,084	10744	\$0.52	X	X				0.0	0.0	0.0	28	
29	Mattapan Sta. - Jackson Sq Sta.	14.7	174	\$1,436	432	\$0.60	\$2.72		X		Minor		14.7	174	\$1,436	432	\$2.72		I				0.0	0.0	0.0	29	
30	Mattapan Sta. - Roslindale Sq.	19.1	202	\$1,799	815	\$0.60	\$1.61		X		None		19.1	202	\$1,799	815	\$1.61		I				0.0	0.0	0.0	30	
31	Mattapan Sta. - Forest Hills Sta.	42.8	443	\$3,998	3047	\$0.60	\$0.71		X		None		42.8	443	\$3,998	3047	\$0.71		I				0.0	0.0	0.0	31	
32	Wolcott Sq or Cleary Sq. - Forest Hills Sta.	64.9	789	\$6,406	4174	\$0.60	\$0.93		X		None		64.9	789	\$6,406	4174	\$0.93		X				0.0	0.0	0.0	32	
33	River & Milton Sts. - Mattapan Sta.	12.7	144	\$1,225	303	\$0.60	\$3.44		X		Minor		12.7	144	\$1,225	303	\$3.44		I				0.0	0.0	0.0	33	
34	Dedham Line - Forest Hills Sta.	28.3	366	\$2,861	1470	\$0.60	\$1.35		X		None		28.3	366	\$2,861	1470	\$1.35		X				0.0	0.0	0.0	34	
34E	Walpole - Forest Hills Sta.	60.3	810	\$6,178	2157	\$0.95	\$1.91		X		None		60.3	810	\$6,178	2157	\$1.91		X				0.0	0.0	0.0	34E	
35	Dedham Mall - Forest Hills Sta.	27.3	341	\$2,724	1084	\$0.60	\$1.91		X		Minor		27.3	341	\$2,724	1055	\$1.98		I				0.0	0.0	-29.0	35	
36	VA Hosp - Forest Hills Sta. Via Chas. River Loop	33.9	348	\$3,156	1282	\$0.60	\$1.86		X		Minor		33.9	348	\$3,156	1282	\$1.86		I				0.0	0.0	0.0	36	
37	Baker & Vermont Sts. - Forest Hills Sta.	24.3	218	\$2,170	617	\$0.60	\$2.92		X		Minor		24.3	218	\$2,170	617	\$2.92		I				0.0	0.0	0.0	37	
38	Wren St. - Forest Hills Sta.	14.4	177	\$1,429	287	\$0.60	\$4.38		X		Minor		14.4	177	\$1,429	287	\$4.38		I				0.0	0.0	0.0	38	
39	Forest Hills Sta. - Back Bay Sta.	143.0	1287	\$12,773	8276	\$0.53	\$1.02		X		None		143.0	1287	\$12,773	8276	\$1.02		X				0.0	0.0	0.0	39	
40	Georgetowne - Forest Hills Sta.	12.7	144	\$1,218	503	\$0.60	\$1.82		X		Moderate		12.7	144	\$1,220	516	\$1.76		I				0.0	0.4	13.0	40	
41	Centre & Eliot Sts. - JFK U Mass Sta	24.4	201	\$2,125	826	\$0.60	\$1.97		X		None		24.4	201	\$2,125	826	\$1.97		X				0.0	0.0	0.0	41	
42	Forest Hills Sta. - Ruggles Sta.	31.4	270	\$2,766	1309	\$0.60	\$1.51		X		Minor		31.4	270	\$2,766	1309	\$1.51		I				0.0	0.0	0.0	42	
43	Ruggles Sta. - Park & Tremont Sts.	49.2	337	\$4,079	1865	\$0.60	\$1.59		X		None		49.2	337</td													

Saturday bus service, current and proposed

"X"=failed, "I"=failed but improved

Route number	Description	Current					Standards				Proposed					Standards				Change			Route number				
		Hours	Miles	Total cost	Ridership	Average fare	Avg. cost / pax	Span	Frequency	Loading	Sched. Adher.	Net cost/pax	None	Hours	Miles	Total cost	Ridership	Avg. cost / pax	Span	Frequency	Loading	Sched. Adher.	Net cost/pax	Hours	Miles	Ridership	
69	Harvard Sq. - Lechmere Sta.	30.1	251	\$2,630	1818	\$0.60	\$0.85		X				None	30.1	251	\$2,630	1818	\$0.85		X				0.0	0.0	0.0	69
70	Cedarwood - Central Sq. Cambridge	91.9	1046	\$8,857	4030	\$0.60	\$1.60		X	X			None	91.9	1046	\$8,857	4030	\$1.60		X	X			0.0	0.0	0.0	70
70A	No. Waltham - University Pk., Camb.	34.0	442	\$3,438	1347	\$0.60	\$1.95	X	X	X			None	34.0	442	\$3,438	1347	\$1.95	X	X	X		0.0	0.0	0.0	70A	
71	Watertown Sq. - Harvard Sta.	63.7	682	\$5,824	2446	\$0.60	\$1.78		X				None	63.7	682	\$5,824	2446	\$1.78		X				0.0	0.0	0.0	71
72	Aberdeen & Mt. Auburn - Harvard Sta.	14.1	135	\$1,244	258	\$0.60	\$4.22		X				Minor	14.1	135	\$1,244	258	\$4.22	I				0.0	0.0	0.0	72	
72/75	Belmont Center - Harvard Sta via Huron Ave	6.4	91	\$672	144	\$0.60	\$4.07						Minor	6.4	91	\$672	144	\$4.07	I				0.0	0.0	0.0	72/75	
73	Waverley Sq. - Harvard Sta.	63.4	734	\$5,953	2643	\$0.60	\$1.65		X				None	63.4	734	\$5,953	2643	\$1.65		X				0.0	0.0	0.0	73
74	Belmont Center - Harvard Sta via Concord Ave	12.2	124	\$1,131	203	\$0.60	\$4.97		X				Minor	12.2	124	\$1,131	203	\$4.97	I				0.0	0.0	0.0	74	
75	Belmont Center - Harvard Sta via Fresh Pond Pkwy	8.9	119	\$913	245	\$0.60	\$3.13	X	X				Minor	8.9	119	\$913	245	\$3.13	X	I			0.0	0.0	0.0	75	
77	Arlington Heights - Harvard Sta	127.7	1302	\$11,863	4263	\$0.60	\$2.18		X				None	127.7	1302	\$11,863	4263	\$2.18		X				0.0	0.0	0.0	77
78	Arlmont Village - Harvard Sta	20.6	322	\$2,244	328	\$0.60	\$6.24		X	X			None	20.6	322	\$2,244	328	\$6.24		X	X			0.0	0.0	0.0	78
80	Arlington Center - Lechmere Sta.	32.1	375	\$3,125	1257	\$0.60	\$1.89		X				None	32.1	375	\$3,125	1257	\$1.89		X				0.0	0.0	0.0	80
83	Rindge Ave. - Central Sq., Camb.	28.4	260	\$2,552	1328	\$0.60	\$1.32		X				None	28.4	260	\$2,552	1328	\$1.32		X				0.0	0.0	0.0	83
86	Sullivan Sta. - Cleveland Circle	42.6	400	\$3,857	1880	\$0.60	\$1.45		X				None	42.6	400	\$3,857	1880	\$1.45		X				0.0	0.0	0.0	86
87	Clarendon Hill - Lechmere Sta. via Som.	43.9	426	\$4,011	2292	\$0.60	\$1.15		X				None	43.9	426	\$4,011	2292	\$1.15		X				0.0	0.0	0.0	87
88	Clarendon Hill - Lechmere Sta. Via Hglnd	43.0	404	\$3,889	2257	\$0.60	\$1.12		X				None	43.0	404	\$3,889	2257	\$1.12		X				0.0	0.0	0.0	88
89	Clarendon Hill - Sullivan Sta.	26.6	239	\$2,373	1573	\$0.60	\$0.91		X				None	26.6	239	\$2,373	1573	\$0.91		X				0.0	0.0	0.0	89
90	Davis Sq. Sta. - Wellington Sta.	14.9	168	\$1,432	502	\$0.60	\$2.25		X				None	14.9	168	\$1,432	502	\$2.25		X				0.0	0.0	0.0	90
91	Sullivan Sta. - Central Sq., Camb.	29.7	231	\$2,545	1234	\$0.60	\$1.46		X				None	29.7	231	\$2,545	1234	\$1.46		X				0.0	0.0	0.0	91
92	Assembly Sq Mall - Downtown Via Main St	24.8	189	\$2,114	790	\$0.60	\$2.08		X				None	24.8	189	\$2,114	790	\$2.08		X				0.0	0.0	0.0	92
93	Sullivan Sta. - Downtown Via Bunker Hill	37.5	299	\$3,237	1969	\$0.60	\$1.04		X				None	37.5	299	\$3,237	1969	\$1.04		X				0.0	0.0	0.0	93
94	Medford Sq. - Davis Sq. Sta.	16.6	214	\$1,673	682	\$0.60	\$1.85		X				None	16.6	214	\$1,673	682	\$1.85		X				0.0	0.0	0.0	94
95	West Medford - Sullivan Sta.	27.5	338	\$2,722	763	\$0.60	\$2.97		X				None	27.5	338	\$2,722	763	\$2.97		X				0.0	0.0	0.0	95
96	Medford Sq - Harvard Sta	33.1	329	\$3,052	832	\$0.60	\$3.07		X				None	33.1	329	\$3,052	832	\$3.07		X				0.0	0.0	0.0	96
97	Malden Sta. - Wellington Sta.	9.7	89	\$872	307	\$0.60	\$2.24	X	X				None	9.7	89	\$872	307	\$2.24	X	X			0.0	0.0	0.0	97	
99	Boston Reg. Med Ctr Stoneham - Wellington Sta.	31.2	437	\$3,254	555	\$0.60	\$5.26		X	X			Moderate	29.2	409	\$3,046	534	\$5.10	X	I	-2.0	-28.0	-21.0		99		
100	Elm St. - Wellington Sta.	20.9	234	\$2,007	418	\$0.60	\$4.20		X				None	20.9	234	\$2,007	418	\$4.20		X				0.0	0.0	0.0	100
101	Malden Sta. - Sullivan Sta. Via Medford Sq	37.9	413	\$3,600	1973	\$0.60	\$1.22	X	X				None	37.9	413	\$3,600	1973	\$1.22	X	X			0.0	0.0	0.0	101	
104	Malden Sta. - Sullivan Sta. Via Ferry St	31.6	314	\$2,908	1994	\$0.60	\$0.86		X	X			None	31.6	314	\$2,908	1994	\$0.86	X	I			0.0	0.0	0.0	104	
105	Malden Sta. - Sullivan Sta. Via Main St	13.3	159	\$1,306	372	\$0.60	\$2.91	X	X				None	13.3	159	\$1,306	372	\$2.91	X	X			0.0	0.0	0.0	105	
106	Franklin Sq or Lebanon St. Loop - Wellington Sta.	34.8	379	\$3,304	1128	\$0.60	\$2.33		X				None	34.8	379	\$3,304	978	\$2.78		X				0.0	0.0	-150.0	106
108	Linden Sq. - Wellington Sta.	37.4	401	\$3,535	1230	\$0.60	\$2.27		X				None	37.4	401	\$3,535	1230	\$2.27		X				0.0	0.0	0.0	108
109	Linden Sq. - Sullivan Sta.	27.0	289	\$2,548	1557	\$0.60	\$1.04		X				None	27.0	289	\$2,548	1557	\$1.04	I				0.0	0.0	0.0	109	
110	Wonderland Sta. - Wellington Sta.	29.5	347	\$2,875																							

Saturday bus service, current and proposed

"X"=failed, "I"=failed but improved

Route number	Description	Current					Standards					Proposed					Standards					Change			Route number		
		Hours	Miles	Total cost	Ridership	Average fare	Avg. cost / pax	Span	Frequency	Loading	Sched. Adher.	Net cost/pax.	None	Hours	Miles	Total cost	Ridership	Avg. cost / pax	Span	Frequency	Loading	Sched. Adher.	Net cost/pax.	Hours	Miles	Ridership	
411 Malden Sta. - Revere/Jack Satter House		15.7	210	\$1,609	384	\$0.60	\$3.59	X		X			None	15.7	210	\$1,609	384	\$3.59	X		X			0.0	0.0	0.0	411
426 Central Sq Lynn - Haymarket Sta. via Cliftondale S		26.4	337	\$2,653	504	\$2.85	\$2.41		X				Moderate	37.0	549	\$3,947	696	\$2.82	I	I	I			10.6	212.0	192.0	426
429 Northgate Shopping Center - Central Sq Lynn		29.9	432	\$3,154	688	\$0.60	\$3.98		X				None	29.9	446	\$3,195	712	\$3.89	I	I	I			0.0	13.7	24.0	429
430 Saugus, Appleton St. - Malden Sta.		14.5	192	\$1,482	519	\$0.60	\$2.25	X	X				None	14.5	192	\$1,482	519	\$2.25	X		X			0.0	0.0	0.0	430
431 Neptune Towers - Central Sq Lynn		2.6	30	\$253	3	\$0.60	\$83.71	X	X	X			Major	0.0	0	\$0	0	\$0.00						-3.1	-41.6	-3.0	431
435 Liberty Tree Mall - Central Sq Lynn		26.0	356	\$2,689	513	\$0.60	\$4.64		X				None	26.0	356	\$2,689	513	\$4.64	I					0.0	0.0	0.0	435
436 Danvers Sq - Central Sq Lynn		18.7	245	\$1,900	287	\$0.60	\$6.02		X	X			None	18.7	245	\$1,900	287	\$6.02	I	X				0.0	0.0	0.0	436
441 Marblehead - Haymarket Sq Sta via Paradise Rd.		18.4	329	\$2,131	525	\$2.85	\$1.21		X				None	18.4	329	\$2,131	525	\$1.21	I					0.0	0.0	0.0	441
442 Marblehead - Haymarket Sta via Humphrey St.		27.8	452	\$3,081	603	\$2.85	\$2.26		X				None	27.8	452	\$3,081	603	\$2.26	I					0.0	0.0	0.0	442
450 Salem Depot - Haymarket Sta. via Western Ave.		28.5	437	\$3,084	583	\$2.85	\$2.44		X				Minor	27.5	426	\$2,988	583	\$2.28	I					-1.0	-11.3	0.0	450
451 North Beverly - Salem Depot		5.0	66	\$508	69	\$0.60	\$6.77		X	X			Major	2.0	26	\$203	17	\$11.33						-3.0	-39.6	-52.0	451
455 Salem Depot - Haymarket Sta.		63.5	822	\$6,417	1704	\$2.85	\$0.92		X				None	63.5	822	\$6,417	1704	\$0.92	X					0.0	0.0	0.0	455
465 Liberty Tree Mall - Salem Depot		16.5	196	\$1,614	214	\$0.60	\$6.94		X	X			Minor	15.0	213	\$1,571	214	\$6.74	I	I	I			-1.5	17.0	0.0	465
504 Watertown Yard - Federal & Franklin Sts.		23.7	349	\$2,523	536	\$1.88	\$2.83		X				None	23.7	349	\$2,523	536	\$2.83	X					0.0	0.0	0.0	504
553 Roberts - Federal & Franklin Sts.		18.5	195	\$1,733	244	\$1.50	\$5.60	X	X	X			Minor	17.0	180	\$1,595	234	\$5.32	X	X	I			-1.5	-15.0	-10.0	553
554 Waverley Sq. - Federal & Franklin Sts.		19.3	234	\$1,904	195	\$1.50	\$8.27	X	X	X			Minor	17.8	216	\$1,757	184	\$8.05	X	X	I			-1.5	-18.0	-11.0	554

Note: Per policy, most Quincy service not shown due to recent major changes.

Sunday bus service, current and proposed

X"=failed, "I"=failed but improved

Route number	Description	Current						Standards		Proposed						Standards		Change			Route number				
		Hours	Miles	Total cost	Ridership	Average fare	Avg. cost / pax.	Span	Frequency	Loading	Sched. Adher.	Net cost/pax.	Hours	Miles	Total cost	Ridership	Avg. cost / pax.	Span	Frequency	Loading	Sched. Adher.	Net cost/pax.	Hours	Miles	Ridership
1 Harvard Sq - Dudley Sta. via Mass. Ave.		73.3	625	\$6,446	4914	\$0.60	\$0.71	X		Minor	73.3	625	\$6,446	4914	\$0.71	I		0.0	0.0	0.0		0.0	0.0	0.0	1
8 Harbor Point /U Mass - Kenmore Sta.		40.7	428	\$3,817	643	\$0.60	\$5.34	X		None	40.7	428	\$3,817	643	\$5.34	X		0.0	0.0	0.0		0.0	0.0	0.0	8
9 City Point - Copley Sq. via Broadway Sta		32.2	318	\$2,963	1087	\$0.60	\$2.13	X		None	37.7	343	\$3,381	1118	\$2.42	X		5.5	25.0	31.0					9
10 City Point - Copley Sq. Via BU Med Ctr		26.5	252	\$2,403	739	\$0.60	\$2.65	X		None	26.5	252	\$2,403	739	\$2.65	X		0.0	0.0	0.0		0.0	0.0	0.0	10
11 City Point - Downtown		32.2	328	\$2,987	787	\$0.60	\$3.20	X		Minor	32.2	328	\$2,987	809	\$3.09	X		0.0	0.0	22.0					11
15 Kane Sq. - Ruggles Sta.		54.5	502	\$4,901	2134	\$0.60	\$1.70	X		None	54.5	502	\$4,901	2134	\$1.70	X		0.0	0.0	0.0		0.0	0.0	0.0	15
16 Forest Hills Sta. - U Mass.		24.8	278	\$2,382	1376	\$0.60	\$1.13	X		None	24.8	278	\$2,382	1376	\$1.13	I		0.0	0.0	0.0		0.0	0.0	0.0	16
17 Fields Corner Sta. - Andrew Sta.		10.4	96	\$933	705	\$0.60	\$0.72			None	10.4	96	\$933	705	\$0.72			0.0	0.0	0.0		0.0	0.0	0.0	17
18 Ashmont Sta. - Andrew Sta.		7.5	68	\$670	91	\$0.60	\$6.76	X		None	7.5	68	\$670	91	\$6.76	X		0.0	0.0	0.0		0.0	0.0	0.0	18
21 Ashmont Sta. - Forest Hills Sta.		10.6	98	\$954	224	\$0.60	\$3.66	X	X	None	10.6	98	\$954	224	\$3.66	X	X	0.0	0.0	0.0		0.0	0.0	0.0	21
22 Ashmont Sta. - Ruggles Sta. Via Talbot Ave		61.3	701	\$5,918	3507	\$0.60	\$1.09	X		None	61.3	701	\$5,918	3507	\$1.09	X		0.0	0.0	0.0		0.0	0.0	0.0	22
23 Ashmont Sta. - Ruggles Sta. via Washington St.		62.4	630	\$5,776	3720	\$0.60	\$0.95	X		None	62.4	630	\$5,776	3720	\$0.95	X		0.0	0.0	0.0		0.0	0.0	0.0	23
24 Wakefield Ave. - Mattapan Sta. or Ashmont		12.6	157	\$1,257	356	\$0.60	\$2.93	X		None	12.6	157	\$1,257	356	\$2.93	I		0.0	0.0	0.0		0.0	0.0	0.0	24
26 Ashmont Sta. - Norfolk & Wash. Belt		6.5	56	\$572	200	\$0.60	\$2.26	X		Minor	6.5	56	\$572	200	\$2.26	I		0.0	0.0	0.0		0.0	0.0	0.0	26
28 Mattapan Sta. - Ruggles Sta.		99.7	1028	\$9,293	6569	\$0.60	\$0.81	X	X	None	99.7	1028	\$9,293	6569	\$0.81	X	X	0.0	0.0	0.0		0.0	0.0	0.0	28
30 Mattapan Sta. - Roslindale Sq.		9.3	111	\$911	171	\$0.60	\$4.73	X		None	9.3	111	\$911	171	\$4.73	I		0.0	0.0	0.0		0.0	0.0	0.0	30
31 Mattapan Sta. - Forest Hills Sta.		32.2	325	\$2,982	1739	\$0.60	\$1.11	X		None	32.2	325	\$2,982	1739	\$1.11	I		0.0	0.0	0.0		0.0	0.0	0.0	31
32 Wolcott Sq or Cleary Sq. - Forest Hills Sta.		47.7	706	\$5,085	2497	\$0.60	\$1.44	X	X	None	47.7	706	\$5,085	2497	\$1.44	X	X	0.0	0.0	0.0		0.0	0.0	0.0	32
34 Dedham Line - Forest Hills Sta.		11.3	167	\$1,205	1059	\$0.60	\$0.54			None	11.3	167	\$1,205	1059	\$0.54			0.0	0.0	0.0		0.0	0.0	0.0	34
34E Walpole - Forest Hills Sta.		30.8	442	\$3,239	1241	\$0.95	\$1.66	X		None	30.8	442	\$3,239	1241	\$1.66	X		0.0	0.0	0.0		0.0	0.0	0.0	34E
35 Dedham Mall - Forest Hills Sta.		9.0	119	\$920	414	\$0.60	\$1.62	X		Minor	9.0	119	\$920	414	\$1.62	I		0.0	0.0	0.0		0.0	0.0	0.0	35
36 VA Hosp - Forest Hills Sta. Via Chas. River Loop		26.4	319	\$2,603	1410	\$0.60	\$1.25	X		Minor	26.4	319	\$2,603	1410	\$1.25	I		0.0	0.0	0.0		0.0	0.0	0.0	36
38 Wren St. - Forest Hills Sta.		8.7	102	\$844	177	\$0.60	\$4.17	X		Minor	8.7	102	\$844	177	\$4.17	I		0.0	0.0	0.0		0.0	0.0	0.0	38
39 Forest Hills Sta. - Back Bay Sta.		111.2	1122	\$10,291	5687	\$0.53	\$1.28	X		None	111.2	1122	\$10,291	5687	\$1.28	X		0.0	0.0	0.0		0.0	0.0	0.0	39
40/50 Georgetowne - Forest Hills Sta. Via Cleary Sq (Sun)		7.4	75	\$686	375	\$0.60	\$1.23			None	7.4	75	\$686	375	\$1.23			0.0	0.0	0.0		0.0	0.0	0.0	40/50
41 Centre & Eliot Sts. - JFK U Mass Sta		16.8	159	\$1,520	494	\$0.60	\$2.48	X		None	16.8	159	\$1,520	494	\$2.48	X		0.0	0.0	0.0		0.0	0.0	0.0	41
42 Forest Hills Sta. - Ruggles Sta.		17.8	179	\$1,647	590	\$0.60	\$2.19	X		None	17.8	179	\$1,647	590	\$2.19	X		0.0	0.0	0.0		0.0	0.0	0.0	42
43 Ruggles Sta. - Park & Tremont Sts.		29.6	243	\$2,573	699	\$0.60	\$3.08	X		None	29.6	243	\$2,573	699	\$3.08	X		0.0	0.0	0.0		0.0	0.0	0.0	43
44 Jackson Sq Sta. - Ruggles Sta.		18.4	195	\$1,727	851	\$0.60	\$1.43	X		None	18.4	195	\$1,727	851	\$1.43	X		0.0	0.0	0.0		0.0	0.0	0.0	44
45 Franklin Park - Ruggles Sta.		17.8	184	\$1,661	850	\$0.60	\$1.35	X		None	17.8	184	\$1,661	850	\$1.35	X		0.0	0.0	0.0		0.0	0.0	0.0	45
47 Central Sq. Camb. - Broadway Sta.		31.0	332	\$2,926	697	\$0.60	\$3.60	X		None	31.0	332	\$2,926	697	\$3.60	X		0.0	0.0	0.0		0.0	0.0	0.0	47
55 Queensberry St. - Park & Tremont Sts.		14.5	107	\$1,223	232	\$0.60	\$4.67			None	14.5	107	\$1,223	232	\$4.67			0.0	0.0	0.0		0.0	0.0	0.0	55
57 Watertown Yard - Kenmore Sta.		71.7	836	\$6,972	3736	\$0.60	\$1.27	X	X	None	71.7	836	\$6,972	3736	\$1.27	X	X	0.0	0.0	0.0		0.0	0.0	0.0	57
5																									

Sunday bus service, current and proposed

X"=failed, "I"=failed but improved

Route number	Description	Current						Standards		Proposed						Standards		Change			Route number						
		Hours	Miles	Total cost	Ridership	Average fare	Avg. cost / pax.	Span	Frequency	Loading	Sched. Adher.	Net cost/pax.	None	Type of change	Hours	Miles	Total cost	Ridership	Avg. cost / pax.	Span	Frequency	Loading	Sched. Adher.	Net cost/pax.	Hours	Miles	Ridership
89 Clarendon Hill - Sullivan Sta.		13.6	133	\$1,243	756	\$0.60	\$1.04	X					None	13.6	133	\$1,243	756	\$1.04	I					0.0	0.0	0.0	89
91 Sullivan Sta. - Central Sq., Camb.		12.0	121	\$1,112	570	\$0.60	\$1.35	X					None	12.0	121	\$1,112	570	\$1.35	X					0.0	0.0	0.0	91
93 Sullivan Sta. - Downtown Via Bunker Hill		15.3	147	\$1,394	793	\$0.60	\$1.16	X	X				None	15.3	147	\$1,394	793	\$1.16	X	X				0.0	0.0	0.0	93
94 Medford Sq. - Davis Sq. Sta.		16.2	214	\$1,653	417	\$0.60	\$3.36	X					None	16.2	214	\$1,653	417	\$3.36	X					0.0	0.0	0.0	94
95 West Medford - Sullivan Sta.		12.9	188	\$1,363	338	\$0.60	\$3.43	X					None	12.9	188	\$1,363	338	\$3.43	X					0.0	0.0	0.0	95
96 Medford Sq - Harvard Sta		17.8	183	\$1,658	387	\$0.60	\$3.68	X					None	17.8	183	\$1,658	387	\$3.68	X					0.0	0.0	0.0	96
97 Malden Sta. - Wellington Sta.		9.5	89	\$861	190	\$0.60	\$3.93	X	X				None	9.5	89	\$861	190	\$3.93	X	X				0.0	0.0	0.0	97
99 Boston Reg. Med Ctr Stoneham - Wellington Sta.		16.4	240	\$1,741	290	\$0.60	\$5.40	X					Moderate	15.4	226	\$1,637	282	\$5.21	X		-1.0	-14.0	-8.0		99		
100 Elm St. - Wellington Sta.		9.2	131	\$964	213	\$0.60	\$3.92	X					None	9.2	131	\$964	213	\$3.92	X					0.0	0.0	0.0	100
101 Malden Sta. - Sullivan Sta. Via Medford Sq		18.1	223	\$1,796	883	\$0.60	\$1.43	X	X				None	18.1	223	\$1,796	883	\$1.43	X	X				0.0	0.0	0.0	101
104 Malden Sta. - Sullivan Sta. Via Ferry St		13.9	176	\$1,391	974	\$0.60	\$0.83	X					None	13.9	176	\$1,391	974	\$0.83	I					0.0	0.0	0.0	104
105 Malden Sta. - Sullivan Sta. Via Main St		10.7	135	\$1,068	259	\$0.60	\$3.52	X					None	10.7	135	\$1,068	259	\$3.52	X					0.0	0.0	0.0	105
106 Franklin Sq or Lebanon St. Loop - Wellington Sta.		15.8	198	\$1,580	631	\$0.60	\$1.90	X	X				None	15.8	198	\$1,580	631	\$1.90	X	X				0.0	0.0	0.0	106
108 Linden Sq. - Wellington Sta.		10.7	132	\$1,062	404	\$0.60	\$2.03	X					Moderate	10.7	120	\$1,026	391	\$2.02	X		0.0	-12.0	-13.0		108		
109 Linden Sq. - Sullivan Sta.		13.5	180	\$1,381	948	\$0.60	\$0.86	X					None	13.5	180	\$1,381	948	\$0.86	I		0.0	0.0	0.0		109		
110 Wonderland Sta. - Wellington Sta.		15.8	194	\$1,563	454	\$0.60	\$2.84	X					None	15.8	194	\$1,563	454	\$2.84	X					0.0	0.0	0.0	110
111 Woodlawn or Bway & Park - Haymarket Sta.		53.9	741	\$5,580	3747	\$0.60	\$0.89	X	X				Minor	58.9	808	\$6,092	3967	\$0.94	X		5.0	67.1	220.0		111		
112 Wellington Sta. - Wood Island Sta.		18.8	234	\$1,873	379	\$0.60	\$4.34	X	X				None	18.8	234	\$1,873	379	\$4.34	X	X		0.0	0.0	0.0		112	
116 Wonderland Sta. - Maverick Sta. Via Revere		32.7	315	\$2,985	2032	\$0.60	\$0.87	X	X				Minor	32.7	341	\$3,063	2199	\$0.79	I	I	I	I		0.0	26.1	167.0	116
117 Wonderland Sta. - Maverick Sta. via Beach		35.5	310	\$3,144	2164	\$0.60	\$0.85	X	X				Minor	35.5	310	\$3,144	2206	\$0.83	I	I	I	I		0.0	0.0	42.0	117
119 Northgate Shopping Ctr. - Beachmont Sta.		10.5	131	\$1,047	236	\$0.60	\$3.84	X					None	10.5	131	\$1,047	236	\$3.84	I					0.0	0.0	0.0	119
120 Orient Heights Sta. - Maverick Sta.		19.3	210	\$1,832	534	\$0.60	\$2.83	X					None	19.3	210	\$1,832	534	\$2.83	X					0.0	0.0	0.0	120
134 North Woburn - Wellington Sta.		18.7	206	\$1,781	269	\$0.95	\$5.67	X	X				None	18.7	206	\$1,781	269	\$5.67	X	X	X			0.0	0.0	0.0	134
171 Logan Airport - Dudley Sta. Sunrise		1.3	17	\$129	19	\$1.88	\$4.92	X	X				None	1.3	17	\$129	19	\$4.92	X	X				0.0	0.0	0.0	171
216 Quincy Ctr. Sta. - Houghs Neck		16.2	237	\$1,715	733	\$0.60	\$1.74	X					None	16.2	237	\$1,715	733	\$1.74	X					0.0	0.0	0.0	216
225 Quincy Ctr. Sta. - Weymouth Landing		12.5	166	\$1,274	474	\$0.60	\$2.09	X					None	12.5	166	\$1,274	474	\$2.09	X					0.0	0.0	0.0	225
350 North Burlington - Alewife Sta.		19.1	396	\$2,376	361	\$0.95	\$5.63	X	X				Moderate	19.1	356	\$2,256	356	\$5.39	X	I		0.0	-40.3	-5.0		350	
426 Central Sq Lynn - Haymarket Sta. Via Clifftondale S		25.6	328	\$2,579	386	\$2.85	\$3.83	X					Minor	25.6	328	\$2,579	386	\$3.83	X					0.0	0.0	0.0	426
429 Northgate Shopping Center - Central Sq Lynn		16.7	245	\$1,775	320	\$0.60	\$4.95	X					Minor	19.7	282	\$2,073	368	\$5.03	I	I	I			3.0	37.2	48.0	429
431 Neptune Towers - Central Sq Lynn		2.6	33	\$263	8	\$0.60	\$32.27	X	X				Major	0.0	0	\$0	0	\$0.00						-2.8	-41.6	-8.0	431
435 Liberty Tree Mall - Central Sq Lynn		6.9	95	\$712	158	\$0.60	\$3.91	X	X				None	6.9	95	\$712	158	\$3.91	X	I				0.0	0.0	0.0	435
436 Danvers Sq - Central Sq Lynn		9.5	135	\$995	169	\$0.60	\$5.29	X	X				None	9.5	135	\$995	169	\$5.29	I					0.0	0.0	0.0	436
441 Marblehead - Haymarket Sq Sta via Paradise Rd.		13.7	252	\$1,608	392	\$2.85	\$1.25	X					None	13.7	252	\$1,608	392	\$1.25	I					0.0	0.0	0.0	441
442 Marblehead - Haymarket Sta via Humphrey St.		24.7	397	\$2,728	635	\$2.85	\$1.45	X																			

APPENDIX B:

Comparative Evaluation

Comparative Evaluation: Weekday

Route	Change					Cost per new rider... or ...savings per lost rider	Net cost per pax	
	Type	Peak Hours	Off-peak Hours	Miles	Riders		Current	Proposed
5	Moderate	0	0	4	15	\$0.19	\$3.84	\$3.43
6	Minor	0	0	0	9	(\$0.60)	\$1.55	\$1.50
9	Minor	0	2.4	25	39	\$5.16	\$1.51	\$1.54
11	Minor	0	-1.5	-21.1	11	(\$14.84)	\$2.99	\$2.91
14	Moderate	0	0.4	6.6	10	\$3.87	\$2.25	\$2.26
18	Minor	0.9	1.2	16.8	52	\$3.67	\$2.10	\$2.21
28	Minor	1	1	11.4	19	\$10.14	\$0.88	\$0.89
32	Moderate	1	1.5	85.8	0		\$0.83	\$0.89
33	Minor	0	1	8.7	12	\$6.77	\$2.10	\$2.17
64	Minor	-0.5	0	-4	-11		\$5.37	\$2.41
78	Moderate	0	-5	-73.5	-25		\$20.66	\$4.69
85	Minor	0.5	0	4	22	\$2.39	\$2.66	\$2.65
91	Moderate	0	-0.4	-5.2	-5		\$7.50	\$1.28
92	Moderate	0	-0.4	-4.5	-4		\$9.00	\$2.55
94	Major	0	-1.3	-17.1	-8		\$15.93	\$1.86
111	Major	0	0	0	122	(\$0.60)	\$1.22	\$1.20
113	Major	6	3	90	539	\$1.44	\$0.00	\$1.44
116	Minor	-0.6	0	-5.8	129	(\$1.23)	\$0.68	\$0.63
117	Minor	0	0	0	81	(\$0.60)	\$0.73	\$0.71
119	Minor	0	0	0	24	(\$0.60)	\$3.42	\$3.28
120	Minor	0	0	0	54	(\$0.60)	\$1.27	\$1.23
131	Minor	0	-0.8	-10	-3		\$26.00	\$4.02
325	Minor	-0.3	0	-6.5	-4		\$11.03	\$4.90
326	Minor	0	0	0	10	(\$1.88)	\$3.64	\$3.52
351	Moderate	0	0	16.4	8	\$4.23	\$6.91	\$6.79
354	Minor	1.1	0	16	0		\$3.32	\$3.53
426	Minor	0	-0.5	-18.5	-7		\$9.48	\$1.73
429	Minor	0	-0.1	-0.5	0		\$4.00	\$3.99
431	Major	0	-2.3	-23	-3		\$70.17	\$2.78
435	Minor	0	0	-0.3	-1		\$0.29	\$5.64
441	Major	3.9	1.4	67.2	111	\$3.52	\$2.19	\$2.32
442	Major	-1	-0.3	-8.4	0		\$1.57	\$1.47
449	Minor	-1.3	-0.7	-32.6	-6		\$43.94	\$5.01
450	Minor	0	-2	-14	-6		\$24.94	\$1.82
455	Minor	0	-1.5	-16	-8		\$14.83	\$1.23
459	Moderate	-1	-1	-18.5	-5		\$42.20	\$2.27
505	Major	2	0.9	92.5	34	\$13.23	\$4.99	\$5.29

Comparative Evaluation: Saturday

Route	Change				Cost per new rider... or ...savings per lost rider		Net cost per pax	
	Type	Hours	Miles	Riders			Current	Proposed
5	Moderate	0	4	15	\$0.19	\$0.00	\$2.39	\$2.20
9	Minor	2.4	25	36	\$5.64	\$0.00	\$1.50	\$1.57
11	Minor	-1.5	-21.1	6	(\$26.70)	\$0.00	\$2.46	\$2.35
35	Minor	0	0	-29	\$0.00	(\$0.60)	\$1.91	\$1.98
40	Moderate	0	0.4	13	(\$0.51)	\$0.00	\$1.82	\$1.76
50	Moderate	0	0.4	14	(\$0.51)	\$0.00	\$2.00	\$1.91
99	Moderate	-2	-28	-21	\$0.00	\$9.33	\$5.26	\$5.10
106	None	0	0	-150	\$0.00	(\$0.60)	\$2.33	\$2.78
111	Minor	8	87.7	283	\$2.09	\$0.00	\$0.65	\$0.72
116	Minor	-5.5	-11.6	85	(\$5.05)	\$0.00	\$0.64	\$0.48
117	Minor	0	0	56	(\$0.60)	\$0.00	\$0.64	\$0.62
120	Minor	0	0	38	(\$0.60)	\$0.00	\$1.75	\$1.68
132	None	0	0	37	(\$0.60)	\$0.00	\$8.10	\$6.28
136	Minor	-6.7	-102.8	-75	\$0.00	\$8.72	\$5.34	\$4.45
137	Minor	-5.2	-72.8	-65	\$0.00	\$7.39	\$5.03	\$4.41
245	Minor	1	13.1	12	\$7.86	\$0.00	\$11.50	\$11.10
426	Moderate	10.6	212	192	\$3.89	\$0.00	\$2.41	\$2.82
429	Minor	0	13.7	24	\$1.10	\$0.00	\$3.98	\$3.89
431	Major	-3.1	-41.6	-3	\$0.00	\$83.71	\$83.71	\$0.00
450	Minor	-1	-11.3	0	\$0.00	\$0.00	\$2.44	\$2.28
451	Major	-3	-39.6	-52	\$0.00	\$5.28	\$6.77	\$11.33
465	Minor	-1.5	17	0	\$0.00	\$0.00	\$6.94	\$6.74
553	Minor	-1.5	-15	-10	\$0.00	\$12.35	\$5.60	\$5.32
554	Minor	-1.5	-18	-11	\$0.00	\$11.90	\$8.27	\$8.05

Comparative Evaluation: Sunday

Route	Change				Cost per new rider... or ...savings per lost rider	Net cost per pax		
	Type	Hours	Miles	Riders		Current	Proposed	
9	Minor	5.5	25	31	\$12.90	\$0.00	\$2.13	\$2.42
11	Minor	0	0	22	(\$0.60)	\$0.00	\$3.20	\$3.09
78	Moderate	-2	-29.4	-6	\$0.00	\$34.83	\$8.74	\$8.04
99	Moderate	-1	-14	-8	\$0.00	\$12.43	\$5.40	\$5.21
108	Moderate	0	-12	-13	\$0.00	\$2.15	\$2.03	\$2.02
111	Minor	5	67.1	220	\$1.73	\$0.00	\$0.89	\$0.94
116	Minor	0	26.1	167	(\$0.13)	\$0.00	\$0.87	\$0.79
117	Minor	0	0	42	(\$0.60)	\$0.00	\$0.85	\$0.83
350	Moderate	0	-40.3	-5	\$0.00	\$23.04	\$5.63	\$5.39
429	Minor	3	37.2	48	\$5.62	\$0.00	\$4.95	\$5.03
431	Major	-2.8	-41.6	-8	\$0.00	\$32.27	\$32.27	\$0.00

APPENDIX C:

**Summary of 2006 Service
Plan Public Process**

2006 Service Plan Public Process

I. Preliminary Outreach:

Initial outreach for the plan began in April 2005. Seven outreach workshops in five locations were held in May 2005 to discuss the service and the service planning process. In addition, suggestions were accepted via email, letter, or other channels within the MBTA. The Preliminary 2006 Service Plan was released in December 2005.

II. Preliminary Plan released:

Upon the plan's release, a legal notice was published identifying the route proposals under discussion. A copy of that notice follows:



Public Meeting/Public Hearing Notice

Preliminary 2006 Service Plan: Proposed Bus Service and Service Policy Modifications



The Massachusetts Bay Transportation Authority will hold seven public meetings and one public hearing to obtain public comment regarding proposed service changes and proposed modifications to the MBTA's Service Delivery Policy as described in the Preliminary 2006 Service Plan. All of the routes with major or moderate changes are listed below. The plan is available on the MBTA's web site at www.mbta.com/insidethet/2006_service_plan.asp. Alternative format review copies are available upon request. Written comments should be addressed to MBTA Service Planning Unit, 45 High Street, Boston, MA 02110, or by email to ServicePlan06@mbta.com. Written comments will be accepted through February 17, 2006. Comments from the public will be considered equally regardless of whether they are received in writing, at the public meetings, or at the hearing.

Public meetings will be held on January 24, 25, 31, and February 2, 2006 as detailed below. Community workshops will consist of a presentation by MBTA staff followed by an informal discussion between MBTA staff and the public regarding the Preliminary 2006 Service Plan.

- **January 24, 2006:** 5:30 PM - 7:00 PM. Chelsea City Hall, City Council Chambers, 500 Broadway, Chelsea
- **January 25, 2006:** 6:00 PM - 7:30 PM. Community Minority Cultural Center, Small Business Center (1st floor), 298 Union Street, Lynn
- **January 31, 2006:** 12:30 PM - 2:00 PM and 5:30 PM - 7:00 PM. State Transportation Building, Conference Room 4, 10 Park Plaza, Boston
- **February 2, 2006:** 2:00 - 3:30 PM and 6:00 - 7:30 PM. Dudley Branch Library. 65 Warren Street, Roxbury
- **February 7, 2006:** 6:00 - 7:30 PM. Citywide Senior Center, 806 Massachusetts Avenue, Cambridge

The following public hearing fulfills the requirements of 49 USC Section 5307 (d)(1)(I). This formal public hearing will consist of a presentation by MBTA staff followed by testimony from the public regarding the Preliminary 2006 Service Plan.

- **February 9, 2006:** 6:00 PM - 8:00 PM. Boston Public Library, Mezzanine Conference Room, Johnson Building, 700 Boylston St., Copley Square, Boston

For meetings and hearings, please make any requests for sign language interpreters at least two weeks in advance. Assistive listening devices will be provided. Please plan to arrive early since some sites may have security delays. Picture identification may be required.

The MBTA is also proposing modifications to the *Service Delivery Policy*. The primary purpose of these modifications is to update and streamline the chapters that describe the service planning process. For details, please refer to the Preliminary 2006 Service Plan.

The following is a list of proposed service changes by route. For the routes not listed no major or moderate changes are planned. The plan is designed with no change in operating cost; therefore, any service increase depends on a corresponding service reduction. This represents a reallocation of service, not an increase or decrease in service. Changes in the recommendations listed below are anticipated as a result of the public process. Consequently not all of proposals listed will be implemented. In addition, it is possible that some changes will not occur due to the inability to successfully reallocate the small changes across the region that are necessary to create a cost neutral final plan. Approved changes are projected to be implemented beginning in Fall 2006. For a detailed description of each proposal, please refer to the MBTA's Preliminary 2006 Service Plan.

Key: Day: W = Weekday; Sat = Saturday; Sun = Sunday.

Route	Day	Description
5	W/Sat	Extend to JFK/UMass Station; provide a more uniform hourly schedule
6	W	Replace existing 2:40 PM and 2:55 PM trips with new 5:50 PM and 6:10 PM trips
8	W/Sat/Sun	Reroute outbound via Harrison rather than Washington and E Brookline; add service via <u>South-S</u> Bay Ctr; operate Sun service 9AM-noon every 50 min. via mall rather than every 40
9	W/Sat/Sun	Improve evening service to every 22 min. rather than 30
11	W/Sat/Sun	Extend evening service to operate via Bedford & Chauncy and South Sta during the evening; after 9PM, service would operate every 45 min.
14	W	Start service from Rostlindale earlier, at 6:00AM
18	W	Improve frequency from 5PM - 6:30 PM to operate every 30 min. rather than every 60
28	W	Improve outbound frequency to a bus every 7/8 min. (rather than every 8) from 3:45 PM to 7:15 PM
32	W	Add service in the summer
33	W	Start inbound service earlier with one new trip at 5:45AM
35	W	Run service from 10:00AM to 2:00PM every 35 min. to improve reliability
48	W	Make major route modification to improve reliability
78	W/Sat/Sun	Remove last three round trips every day and the first round trip on Sundays due to low ridership
91	W	Remove last round trip of the day
92	W	Remove last round trip of the day
94	W	Remove last two round trips of the day
99	Sat	End all trips at Molineau Circle; remove first two round trips, last three inbound and last four outbound trips
99	Sun	End all trips at Molineau Circle; remove first round trip, last two inbound and last three outbound trips
100	W	Remove last three round trips of the day
108	Sun	Provide service to Granada Highlands
110	W	Remove last round trip of the day

111	W	Increase frequency to a bus every 5 min.; eliminate service beyond Woodlawn during the Early AM, and AM & PM Peaks
111	Sat	Add trip at 5:00 AM; increase frequency to a bus every 12 min. from 5:00-9:00 AM; increase frequency to a bus every 10 min. from noon-4:00 PM
111	Sun	Increase frequency to a bus every 12-13 min. from 2:00-7:00 PM
119	W	Discontinue 130PM trip; inaugurate 600PM trip.
134	W	Remove last three round trips
216	W/Sat	Midday service via McGrath Hwy akin to 214
217	W	Use Fenn St in lieu of Elm Ave, Ashmont-bound
225	W/Sat/Sun	Use Southern Artery in lieu of Howard St
245	Sat	Add 7:00 PM trip
351	W	End service to Lexington Center due to low ridership and delay to through riders
354	W	Restore two trips in the AM Peak and two trips in the PM Peak
429	W/Sat	First "C" note trip of evening via Garfield and Newcomb
429	Sat	Add 7:00 AM trip
429	Sun	Add two Sunday morning trips
431	W/Sat/Sun	Discontinue except for weekday 7:00 AM and 2:35 PM trips
435	W	All trips via Boston Street
442	W	5:20 AM and 5:50 AM Inbound trips from Marblehead replace 5:40 AM trip
451	Sat	Discontinue
456	W	Discontinue 8:30 AM outbound trip
459	W/Sat	Reduce to three round trips; replace other trips with Route 455W trips
465	Sat	New schedule; interline with 450W
501	W	Make some outbound PM trips exit Pike in Allston rather than Newton Corner
503	W	Improve service from 7:20 AM - 8:20 AM to every 15 min. rather than 20; reroute outbound PM service to exit Pike in Allston rather than Newton Crr.
553	Sat	Modify frequency to operate every 90 min. rather than 60
554	Sat	Modify frequency to operate every 90 min. rather than 60
136/137	W	Decrease frequency on common alignment from a bus every 30 min. to a bus every 45 min.
40/50	Sat	Extend service by two hours by replacing the last two 40 and last two 50 round trips with four 40/50 round trips
441/442	W/Sat/Sun	Alternate evening service between Paradise & Humphrey
448/449	W	Replace with Route 441W/442W
450/450WW		Add 6:55 PM inbound trip, last inbound bus 25 min. earlier
450W	Sat	New schedule; interline with Route 465
Orng. Ln. Sun		Improve early Sunday morning service to operate every 15 min. rather than every 17/18

The notice was listed on-line at the MBTA website and also published in the Boston Metro, the Boston Globe, El Mundo, Sampan, and the Bay State Banner.

A copy of the full plan was posted on-line and mailed to the main branch of libraries in the bus service area. A letter was sent to MBTA Advisory Board members or designees, and to state senators and state representatives in the MBTA bus service area announcing the plan. Copies were also made available to the MBTA Advisory Board.

III. Comments regarding Preliminary Plan

Feedback regarding the plan was received in a variety of formats.

- **Public meetings:** Seven public meetings were held in January and February 2006. The public meetings began with a brief presentation on the service planning process and a summary of local changes by a member of the Service Planning department. Afterwards, the meetings were opened for general discussion. Attendance at the public meetings varied, ranging from as few as one to as many as forty members of the public per meeting.
- **Public hearing:** A formal public hearing was held February 9, 2006 at the Boston Public Library in Copley Square. A brief presentation was given and the hearing was then opened for comment. Thirteen members spoke for the record. Eight of the thirteen were from the Academy of Public Service in Dorchester.
- **Other meetings:** Meetings were also held with the MBTA Advisory Board and with legislative staff at the State House.
- **In writing:** Comments were accepted in writing either via email or letter.

Comments were heard on the following proposals:

- **New Route:** Bellingham Sq., Chelsea – Kendall Sq., Cambridge: The proposed new route was well received, although there were some requests for more service.
- **11:** Extending evening service to travel via the full route was well received.

- **18, 28:** The proposals to improve PM frequency were received favorably
- **78, 91, 92, 94, 100, 110, 134:** There was substantial opposition to cutting first/last trips in general, especially on Route 78.
- **111:** Increasing service between Woodlawn and Haymarket was received favorably.
- **112:** The proposal to restructure service to Admiral's Hill and Quigley Hospital met resistance from area residents and elected officials.
- **170:** The proposal to discontinue service beyond Waltham was not well received.
- **426:** The proposal to improve reliability was received favorably.
- **441/442, 441W/442W, 448/449:** There was substantial resistance to the proposed elimination of routes 448 and 449 and substituting more trips on the 441W and 442W. Support was voiced for the proposals to alternate the 441 and 442 in evening and to change the 441/442 deadheads from Wonderland to Lynn into in-service trips.
- **501/503:** Rerouting some trips via the Allston Turnpike exit and Union Square received mixed responses, and a more detailed running time analysis was requested.
- **503:** Improving the morning frequency and reliability was received favorably.
- **Orange Line:** The proposal to improve frequency was received favorably.

Comments about crowding and schedule adherence were received on many routes, including 1, 8, 9, 16, 18, 19, 21, 23, 28, 32, 39, 44, 45, 47, 57, 66, 69, 71, 72, 73, 83, 85, 92, 114, 116, 117, 501, 503. Other suggestions were offered to improve service, such as:

- **22/23/26:** Modify some trips to increase service to Norfolk St near the Academy of Public Service in Dorchester.
- **44:** Improve frequency on Sundays.
- **85:** Improve frequency and span of service.
- **92:** Add Sunday service to the growing Assembly Square Mall.
- **116/117:** Allow for more flexibility for inbound pickups during peaks.
- **216:** Simplify the service by placing bus service on one corridor by time of day.
- **222:** Reconfigure route to connect with the Greenbush line when commuter rail service begins, and extend service down to Jackson Square.
- **351:** Add a stop at the building housing Nokia and Cosmos.
- **426/426W:** Eliminate stop at Wonderland on the weekends because road work interferes with schedule adherence.
- **429:** Add more stops in route 1 corridor between Walnut Street Plaza and Square One Mall, especially at Target store where Lynn Fells Pkwy diverges from Rte 1. Reexamine the idea of diverting the 429 off Rte 1 onto Lynn Fells Pkwy and Main St.
- **430:** Move the layover of all 430 trips to be on Appleton Street.
- **435:** Add later Sunday service to serve the part of the mall that stays open after 6pm.
- **Green Line:** Extend D Line service to North Station and Lechmere.

Some suggestions that are not recommended for this plan will be considered in the future.

The MBTA also received suggestions for changes regarding other operational aspects, e.g. improved customer service, improved coordination in corridors served by multiple bus routes, more detailed announcements about the cause of subway trains being held, and more subway train location displays such as at Maverick.

APPENDIX D:

**Revisions to MBTA
Service Delivery Policy**

Chapter 3: Service Standards

The Service Standards perform two important functions. First, they establish the minimum or maximum acceptable levels of service that the MBTA must provide to achieve the Service Objectives.¹ Second, they provide a framework for measuring the performance of MBTA services as a part of the Service Evaluation Process, which is discussed in Chapter 4. Through the Service Evaluation Process, data collected on MBTA services are compared against the Service Standards to determine whether or not individual existing services perform at acceptable levels and to evaluate the potential of possible service changes. The Service Evaluation Process also uses the Service Standards to compare the performance of existing services, with those of proposed service changes and/or possible new services, to prioritize the allocation of resources within the system.

It should be noted that the performance of service is often affected by conditions that are beyond the control of the MBTA. For example, buses may run late on some days as a result of roadwork, lack of snow removal, or lax parking enforcement by a municipality. When such factors are known to be a source of poor performance for a particular service, the MBTA will work with the other involved parties, and the remedies developed for improving the service may be different than when external factors are not a known issue.

Use of the Service Standards in the Service Evaluation Process is designed to help ensure a cost-effective allocation of service within the overall levels of operations funding, which are determined through the annual budget process. The Service Evaluation Process also documents Service Standard violations, which, if they cannot be resolved within the existing fiscal constraints, indicate a failure of the budget to provide sufficient resources to satisfy the Service Objectives discussed in Chapter 2. Over time, only increasing the budget or revising the Service Standards can resolve such inconsistencies.

Each of the Service Standards is expressed as either a threshold that must be met, or a guideline that the Authority strives to meet. Following is a discussion of the MBTA Service Standards, in the context of the Service Objective to which each applies. These Standards address the fixed route modes operated by the MBTA (as described in Chapter 2).

¹ The Schedule Adherence Standard provides an exception to this general rule. For example, the Span of Service Standard sets the minimum hours of service, and the schedules are built accordingly, so that operation of the service either meets the minimum standard, or does not. By contrast, the Schedule Adherence Standard describes the degree of acceptable variability from the published schedules (for evaluation purposes), but does not prescribe the rules of how service is operated. In the field operators are instructed to adhere to the published schedules as closely as possible (given traffic and road conditions, etc.)—they are not instructed that they have a range of acceptable arrival/departure times.

Chapter 4: Service Planning Process

The MBTA regularly evaluates the performance of its services through the service planning process. The primary objective of the service planning process is to ensure that the MBTA uses available resources in the most effective manner by developing strategies to improve performance and/or to reallocate service within the system.

The service planning process varies somewhat by mode and is affected by whether or not the service is operated directly by the MBTA (bus and rapid transit), or is operated for the MBTA by a contractor (commuter rail and boat). Following is a discussion of the process for each mode. The final section of this chapter outlines the procedures for public participation in the service planning process.

Directly Operated Services

- **Bus Service Planning Process**

The bus service planning process takes place on two levels. One is the on-going evaluation and implementation of incremental service changes that occur on a quarterly basis. The other is a two-year planning cycle for development of the biennial Service Plan, which can include major restructuring of existing bus routes and proposals for new bus services.

The data used for all service evaluations are collected on a regular basis through various means to track and evaluate the performance of services against each of the Service Standards (as defined in Chapter 3).

The primary differences between the on-going service planning process and the planning process used to develop the Biennial Service Plan include:

- the magnitude of the service changes considered (minor or major—as defined below);
- the extent and type of analysis used;
- the level of public participation; and
- whether the effort is incremental or comprehensive in nature.

Minor changes to bus services are made through the on-going service planning process and can be implemented with existing equipment, within the adopted budget, and without significantly affecting route structure or service delivery.

Major changes are ones that will have a significant effect on riders, resource requirements, route structure, or service delivery (as defined in Table 1). These are evaluated and implemented only through development of the Biennial Service Plan (with the exception of new services associated with a major capital investment).

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Table 1: Minor & Major Service Changes

Magnitude:	Type:	Resource Implications:
Minor	<ul style="list-style-type: none"> • Running time adjustments • Departure time adjustments • Headway changes to match ridership and service levels (provided the frequency and loading standards are still met) • Changes to bus stop locations • Alignment changes • Span of service changes within 1 hour or less • Route extensions of 1 mile or less • Route variation modifications 	Changes that can be implemented with existing equipment and within the adopted budget
Major	<ul style="list-style-type: none"> • Major service restructuring • Implementation of new routes or services • Elimination of a route or service • Elimination of part of a route • Span of service changes greater than 1 hour 	Changes that will have a significant affect on resources and may potentially have a significant affect on riders

The On-going Bus Service Planning Process: The service changes that are evaluated in the on-going service planning process can be initiated in a variety of ways. These include, but are not limited to:

- service requests and/or complaints from the public;
- feedback from MBTA Bus Operations staff, such as drivers, garage superintendents or schedule makers;
- proposals made by the MBTA Service Planning staff; and
- studies completed by CTPS (for the Boston MPO), by other regional entities, or by municipalities.

Service Planning staff screen all potential service changes to determine whether they are minor or major in nature (as defined above). In addition, each potential change is considered using the criteria listed below (not all criteria are necessarily used in every evaluation).

- Performance measured against the Service Standards
- The rationale for the change
- Net cost per new passenger
- Net savings per lost passenger
- Changes in ridership
- Changes in travel time for existing riders
- Changes in operating costs
- Changes in fare revenue
- Key characteristics and demographics of the market
- Contribution to the achievement of external mandates, such as Title VI
- Other factors, as appropriate

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Proposed minor changes that have been analyzed by the Service Planning Department are presented to the Service Committee, which is chaired by the Manager of Service Planning and includes representatives of the following departments:

- Service Planning
- Plans and Schedules
- Bus Operations
- Operations Support
- Customer Communications Center
- Office for Transportation Access
- Public Affairs,
- Intergovernmental Affairs
- Other Departments, as appropriate

Minor changes that are approved by the Service Committee, and that can be made within the adopted budget, are implemented as soon as possible—usually in the next quarterly schedule change.

The Biennial Service Plan Process: Every two years, the MBTA develops a biennial Service Plan that describes the performance of the system and the services that will be operated in the upcoming two years. The plan encompasses all fixed-route services and includes:

- a description of the performance of existing services;
- recommendations for major service changes;
- a discussion of service changes that were considered and/or evaluated, but are not recommended at the time; and
- a general review of the effectiveness of previous major service changes (major service changes would not be reported on in the service planning cycle immediately after their implementation, but would be evaluated in the following planning cycle to allow time for ridership to build).

As with the on-going service planning process, a major goal in the development of the biennial Service Plan is to ensure that the MBTA uses available funds in the most effective manner. However, this planning process can also identify major service changes and enhancements that have merit, but that cannot be funded within the existing operating budget. In such cases, the need for additional operating funds can be identified for request, and the service can be implemented when sufficient resources become available.

A key component of the biennial service planning process is an evaluation of the performance of existing services, as measured using the Service Standards found in Chapter 3 of this policy. Based on this analysis, the Service Planning Department proposes major service changes that will improve the performance of services that fail any of the Service Standards. (Minor service changes may also be identified at

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this time; however, they may be implemented as soon as possible, rather than waiting for the full acceptance of the Service Plan.)

Service changes considered in the biennial Service Plan can also be proposed through all of the same avenues as those considered in the on-going service planning process. Indeed, many may be identified through the on-going screening of projects. In addition, public input for the biennial Service Plan is sought through public meetings and public hearings, as described later in this chapter.

During development of the biennial Service Plan, potential major changes are evaluated through a comparative evaluation to determine which represent the best allocation of available resources. To complete the comparative evaluation, the Service Planning Department creates a list of all proposed service increases and reductions. The proposed service increases are ranked using the net cost per new passenger: those that garner the most new passengers at the lowest incremental cost are ranked highest priority for implementation. The proposed service reductions are ranked using the net savings per lost passenger: those that save the most money with the lowest loss of passengers are ranked highest priority for implementation.

Other evaluation criteria are also used in the comparative evaluation, as appropriate, to determine the rank of service change proposals. For example, higher priority would be given to a proposed change that improved a route's performance on one or more of the service standards (as defined in Chapter 3).

After the rankings are completed, the savings from the major service reductions are compared to the cost of major service enhancements to help select the proposed service changes. The goal is to maximize ridership and service performance in a cost-effective manner. The recommendations that result from this process are reviewed by the Service Committee to assess the feasibility of implementation before they are included in the Preliminary Service Plan. Each Preliminary Service Plan is made available to the public for review and comment (as described later in this chapter). A list of the final recommendations, an indication of the routes that still violate one or more of the service standards, and the Title VI analysis are then submitted to the MBTA Board of Directors for final approval before the changes are implemented.

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Table 2: Summary of Service Planning Processes

	On-going Service Planning Process	Biennial Service Plan Process
Magnitude of changes:	<ul style="list-style-type: none"> • Minor 	<ul style="list-style-type: none"> • Major
Initiation of changes:	<ul style="list-style-type: none"> • Requests/complaints from public • Bus Operations feedback • Service Planning Staff • Service Studies 	<ul style="list-style-type: none"> • Requests/complaints from public • Bus Operations feedback • Service Planning Staff • Service Studies • Public Meetings
Evaluation of changes:	<ul style="list-style-type: none"> • Route or garage level analysis using the Evaluation Criteria • Review by Service Committee 	<ul style="list-style-type: none"> • Route or garage level analysis using the Evaluation Criteria (including performance review of all services using Service Standards) • Comparative evaluation of proposed service changes, and possible new services • Review by Service Committee • Public review and comment • Title VI analysis
Implementation of changes:	<ul style="list-style-type: none"> • Quarterly with regular schedule changes 	<ul style="list-style-type: none"> • Biennially, upon approval of the Service Plan by the MBTA Board of Directors

- **Light Rail/Heavy Rail Service Planning Process**

Contract Services

- **Commuter Rail Service Planning Process**
- **Commuter Boat Service Planning Process**

Public Participation

Public participation in the service planning process varies somewhat by mode and occurs as both an on-going process and as a Service Plan specific process. The purpose of public involvement in the service planning process is to promote a regular dialogue with existing and potential riders, elected officials, and communities regarding their ever-changing service needs

- **On-Going Public Outreach**

The MBTA provides avenues for on-going communication through the MBTA's website, as well as the customer complaints phone line and comments sent to individual MBTA officials. Service related comments/requests are directed to the appropriate department

for consideration and response. Upon request, MBTA staff also attend public meetings held by municipalities and meetings with public officials to address specific service issues. In addition, from time to time, the MBTA may conduct specific market or route-based surveys to gather direct input on a major service change or potential new service.

• **Biennial Service Plan Public Outreach**

Service Plan outreach efforts are intended to provide members of the public with the opportunity to submit service requests to the MBTA for consideration in development of the Biennial Service Plan. To this end, the MBTA solicits ideas for service changes through written comments (submitted on-line or via the mail), as well as through public meetings throughout the service area, before a draft plan is written.

Upon completion of the draft biennial Service Plan, the MBTA schedules a second round of public meetings in appropriate locations. At these open meetings the MBTA presents the analysis and issues behind the proposed service changes and solicits public comments on them. In addition, at least one Public Hearing is held to receive formal public comments on the draft Biennial Service Plan. MBTA staff then assess and analyze the suggestions made through the public comments and, as appropriate, incorporate them into the final recommendations that go to the MBTA Board of Directors for approval before implementation.

All Service Plan public notifications, meetings, and hearings will conform to the requirements of the Americans with Disabilities Act, Title VI of the Civil Rights Act of 1964, and MBTA policies associated with these laws.